

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF OHIO
EASTERN DIVISION

UNITED STATES OF AMERICA
Plaintiff,

v.

LORAIN COUNTY METROPOLITAN PARK DISTRICT,
BROWNING-FERRIS INDUSTRIES OF OHIO, INC.,
GOODRICH CORPORATION,
FORD MOTOR COMPANY,
GENERAL MOTORS CORPORATION, and
CHEVRON ENVIRONMENTAL MANAGEMENT
COMPANY, for itself and on behalf of KEWANEE
INDUSTRIES, INC.

Defendants.

Civil Action No. ____

CONSENT DECREE

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I. BACKGROUND

A. The United States of America ("United States"), on behalf of the Administrator of the United States Environmental Protection Agency ("U.S. EPA"), filed a complaint in this matter pursuant to Sections 106 and 107 of the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), 42 U.S.C. §§ 9606, 9607.

B. The United States in its complaint seeks, inter alia: (1) performance of studies and response work by the defendants at the Ford Road CERCLA Site in Elyria, Lorain County, Ohio consistent with the National Contingency Plan, 40 C.F.R. Part 300 (as amended) ("NCP"); and (2) reimbursement of Future Response Costs incurred by U.S. EPA in overseeing the performance of studies and response work by the defendants.

C. In accordance with the NCP and Section 121(f)(1)(F) of CERCLA, 42 U.S.C. § 9621(f)(1)(F), U.S. EPA notified the State of Ohio (the "State") on June 21, 2001, of negotiations with potentially responsible parties regarding the implementation of the remedial design and remedial action for the Site, and U.S. EPA has provided the State with an opportunity to participate in such negotiations and be a party to this Consent Decree.

D. In accordance with Section 122(j)(1) of CERCLA, 42 U.S.C. § 9622(j)(1), U.S. EPA notified the United States Fish and Wildlife Service on June 21, 2001, of negotiations with potentially responsible parties regarding the release of hazardous substances that may have resulted in injury to the natural resources under Federal trusteeship and encouraged the trustee(s) to participate in the negotiation of this Consent Decree.

E. The defendants that have entered into this Consent Decree ("Settling Defendants") do not admit any liability to the Plaintiff arising out of the transactions or occurrences alleged in the complaint, nor do they acknowledge that the release or threatened release of hazardous substance(s) at or from the Site constitutes an imminent or substantial endangerment to the public health or welfare or the environment.

F. In December 2002, certain of Settling Defendants, under U.S. EPA oversight, commenced a Remedial Investigation and Feasibility Study ("RI/FS") for the Site pursuant to 40 C.F.R. § 300.430.

G. Certain of the Settling Defendants completed a Remedial Investigation ("RI") and a Feasibility Study ("FS"), and submitted a final RI/FS report in March 2006.

H. Pursuant to Section 117 of CERCLA, 42 U.S.C. § 9617, U.S. EPA published notice of the completion of the FS and of the proposed plan for remedial action on July 6, 2006, in a major local newspaper of general circulation. U.S. EPA provided an opportunity for written and oral comments from the public on the proposed plan for remedial action. A copy of the transcript of the public meeting is available to the public as part of the administrative record upon which the Regional Administrator based the selection of the response action.

I. The decision by U.S. EPA regarding the remedial action to be implemented at the Site is embodied in a final Record of Decision ("ROD"), executed on September 27, 2006, on which the State had a reasonable opportunity to review and comment. The ROD includes a responsiveness summary to the public comments. Notice of the final plan was published in accordance with Section 117(b) of CERCLA.

J. Based on the information presently available to U.S. EPA, U.S. EPA believes that the Work will be properly and promptly conducted by Settling Defendants if conducted in accordance with the requirements of this Consent Decree and its appendices.

K. Solely for the purposes of Section 113(j) of CERCLA, the Remedial Action selected by the ROD and the Work to be performed by Settling Defendants shall constitute a response action taken or ordered by the President.

L. The Parties recognize, and the Court by entering this Consent Decree finds, that this Consent Decree has been negotiated by the Parties in good faith and implementation of this Consent Decree will expedite the cleanup of the Site and will avoid prolonged and complicated litigation between the Parties, and that this Consent Decree is fair, reasonable, and in the public interest.

NOW, THEREFORE, it is hereby Ordered, Adjudged, and Decreed:

II. JURISDICTION

1. This Court has jurisdiction over the subject matter of this action pursuant to 28 U.S.C. §§ 1331 and 1345, and 42 U.S.C. §§ 9606, 9607, and 9613(b). This Court also has personal jurisdiction over Settling Defendants. Solely for the purposes of this Consent Decree and the underlying complaint, Settling Defendants waive all objections and defenses that they may have to jurisdiction of the Court or to venue in this District. Settling Defendants shall not challenge the terms of this Consent Decree or this Court's jurisdiction to enter and enforce this Consent Decree.

III. PARTIES BOUND

2. This Consent Decree applies to and is binding upon the United States and upon Settling Defendants and their successors and assigns. Any change in ownership or corporate status of a Settling Defendant including, but not limited to, any transfer of assets or real or personal property, shall in no way alter such Settling Defendant's responsibilities under this Consent Decree.

3. Settling Defendants shall provide a copy of this Consent Decree to each contractor hired to perform the Work (as defined below) required by this Consent Decree and to each person representing any Settling Defendant with respect to the Site or the Work and shall condition all contracts entered into hereunder upon performance of the Work in conformity with the terms of this Consent Decree. Settling Defendants or their contractors shall provide written notice of the Consent Decree to all subcontractors hired to perform any portion of the Work required by this Consent Decree. Settling Defendants shall nonetheless be responsible for ensuring that their contractors and subcontractors perform the Work contemplated herein in accordance with this Consent Decree. With regard to the activities undertaken pursuant to this Consent Decree, each contractor and subcontractor shall be deemed to be in a contractual relationship with Settling Defendants within the meaning of Section 107(b)(3) of CERCLA, 42 U.S.C. § 9607(b)(3).

IV. DEFINITIONS

4. Unless otherwise expressly provided herein, terms used in this Consent Decree which are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in CERCLA or in such regulations. Whenever terms listed below are

used in this Consent Decree or in the appendices attached hereto and incorporated hereunder, the following definitions shall apply:

“CERCLA” shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. §§ 9601, *et seq.*

“Consent Decree” shall mean this Decree and all appendices attached hereto (listed in Section XXIX). In the event of conflict between this Decree and any appendix, this Decree shall control.

“Day” shall mean a calendar day unless expressly stated to be a working day. “Working day” shall mean a day other than a Saturday, Sunday, or Federal holiday. In computing any period of time under this Consent Decree, where the last day would fall on a Saturday, Sunday, or Federal holiday, the period shall run until the close of business of the next working day.

“Effective Date” shall be the effective date of this Consent Decree as provided in Paragraph 108.

“U.S. EPA” shall mean the United States Environmental Protection Agency and any successor departments or agencies of the United States.

“Ohio EPA” shall mean the Ohio Environmental Protection Agency and any successor departments or agencies of the State.

“Future Response Costs” shall mean all costs, including, but not limited to, direct and indirect costs, that the United States incurs after entry of this Consent Decree in reviewing or developing plans, reports and other items pursuant to this Consent Decree, verifying the Work, or otherwise implementing, overseeing, or enforcing this Consent Decree, including, but not limited to, payroll costs, contractor costs, travel costs, laboratory costs, the costs incurred pursuant to Sections VII, IX (including, but not limited to, the cost of attorney time and any monies paid to secure access and/or to secure or implement institutional controls including, but not limited to, the amount of just compensation), XV, and Paragraph 89 of Section XXI.

“Interest,” shall mean interest at the rate specified for interest on investments of the U.S. EPA Hazardous Substance Superfund established by 26 U.S.C. § 9507, compounded annually on October 1 of each year, in accordance with 42 U.S.C. § 9607(a). The applicable rate of interest shall be the rate in effect at the time the interest accrues. The rate of interest is subject to change on October 1 of each year.

“Ford Road Special Account” shall mean the special account established at the Site by U.S. EPA pursuant to Section 122(b)(3) of CERCLA, 42 U.S.C. § 9622(b)(3).

“National Contingency Plan” or “NCP” shall mean the National Oil and Hazardous Substances Pollution Contingency Plan promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, and any amendments thereto.

“Operation and Maintenance” or “O & M” shall mean all activities required to maintain the effectiveness of the Remedial Action as required under the Operation and Maintenance Plan approved or developed by U.S. EPA pursuant to this Consent Decree and the Statement of Work (SOW).

“Paragraph” shall mean a portion of this Consent Decree identified by an arabic numeral or an upper case letter.

“Parties” shall mean the United States and Settling Defendants.

"Performance Standards" shall mean the cleanup standards and other measures of achievement of the goals of the Remedial Action, set forth in Section 8 of the ROD and Section II of the SOW, which constitute ARARs (applicable or relevant and appropriate requirements) of federal and state environmental laws.

"Plaintiff" shall mean the United States.

"RCRA" shall mean the Solid Waste Disposal Act, as amended, 42 U.S.C. §§ 6901 *et seq.* (also known as the Resource Conservation and Recovery Act).

"Record of Decision" or "ROD" shall mean the U.S. EPA Record of Decision relating to the Site signed on September 27, 2006, by the Regional Administrator, U.S. EPA Region 5, or his delegate, and all attachments thereto. The ROD is attached as Appendix A.

"Remedial Action" shall mean those activities, except for Operation and Maintenance, to be undertaken by Settling Defendants to implement the ROD, in accordance with the SOW and the final Remedial Design and Remedial Action Work Plans and other plans approved by U.S. EPA.

"Remedial Action Work Plan" shall mean the document developed pursuant to Paragraph 12 of this Consent Decree and approved by U.S. EPA, and any amendments thereto.

"Remedial Design" shall mean those activities to be undertaken by Settling Defendants to develop the final plans and specifications for the Remedial Action pursuant to the Remedial Design Work Plan.

"Remedial Design Work Plan" shall mean the document developed pursuant to Paragraph 11 of this Consent Decree and approved by U.S. EPA, and any amendments thereto.

"Section" shall mean a portion of this Consent Decree identified by a Roman numeral.

"Settling Defendants" shall mean those Parties identified in Appendix D.

"Site" shall mean the Ford Road Landfill CERCLA Site, encompassing approximately 15 acres, located on the northern edge of Elyria on Ford Road, about 1.5 miles from Interchange 8 of the Ohio Turnpike, Interstate 90, in Elyria, Lorain County, Ohio, and depicted generally on the map attached as Appendix C.

"State" shall mean the State of Ohio.

"Statement of Work" or "SOW" shall mean the statement of work for implementation of the Remedial Design, Remedial Action, and Operation and Maintenance at the Site, as set forth in Appendix B to this Consent Decree and any modifications made in accordance with this Consent Decree.

"Supervising Consultant/Engineer" shall mean the principal consultant/engineer retained by Settling Defendants to supervise and direct the implementation of the Work under this Consent Decree.

"United States" shall mean the United States of America.

"Waste Material" shall mean (1) any "hazardous substance" under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); (2) any pollutant or contaminant under Section 101(33), 42 U.S.C. § 9601(33); (3) any "solid waste" under Section 1004(27) of RCRA, 42 U.S.C. § 6903(27); and (4) any "hazardous waste" under O.R.C. 3734.01(1).

“Work” shall mean all activities Settling Defendants are required to perform under this Consent Decree, except those required by Section XXV (Retention of Records).

V. GENERAL PROVISIONS

5. Objectives of the Parties. The objectives of the Parties in entering into this Consent Decree are to protect public health or welfare or the environment at the Site by the design and implementation of response actions at the Site by Settling Defendants, to reimburse certain response costs of the Plaintiff, and to resolve the claims of Plaintiff against Settling Defendants as provided in this Consent Decree as well as potential claims among the Settling Defendants.

6. Commitments by Settling Defendants.

a. Settling Defendants shall finance and perform the Work in accordance with this Consent Decree, the ROD, the SOW and all work plans and other plans, standards, specifications, and schedules set forth herein or developed by Settling Defendants and approved by U.S. EPA pursuant to this Consent Decree. Settling Defendants shall also reimburse Plaintiff's Future Response Costs as provided in this Consent Decree.

b. The obligations of Settling Defendants to finance and perform the Work and to pay amounts owed the United States under this Consent Decree are joint and several. In the event of the insolvency or other failure of any one or more Settling Defendants to implement the requirements of this Consent Decree, the remaining Settling Defendants shall complete all such requirements.

7. Compliance With Applicable Law. All activities undertaken by Settling Defendants pursuant to this Consent Decree shall be performed in accordance with the requirements of all applicable federal and state laws and regulations. Settling Defendants must also comply with all applicable or relevant and appropriate requirements of all Federal and state environmental laws as set forth in the ROD and the SOW. The activities conducted pursuant to this Consent Decree, if approved by U.S. EPA, shall be considered to be consistent with the NCP.

8. Permits.

a. As provided in Section 121(e) of CERCLA and Section 300.400(e) of the NCP, no permit shall be required for any portion of the Work conducted entirely on-site (i.e., within the real extent of contamination or in very close proximity to the contamination and necessary for implementation of the Work). Where any portion of the Work that is not on-site requires a federal or state permit or approval, Settling Defendants shall submit timely and complete applications and take all other actions necessary to obtain all such permits or approvals.

b. Settling Defendants may seek relief under the provisions of Section XVIII (Force Majeure) of this Consent Decree for any delay in the performance of the Work resulting from a failure to obtain, or a delay in obtaining, any permit required for the Work.

c. This Consent Decree is not, and shall not be construed to be, a permit issued pursuant to any federal or state statute or regulation.

9. Notice to Successors-in-Title.

a. With respect to any property owned or controlled by Settling Defendants that is located within the Site, within 30 days after the entry of this Consent Decree, Settling

Defendants shall submit to U.S. EPA for review and approval a notice to be filed with the Recorder's Office (or Registry of Deeds or other appropriate office), Lorain County, State of Ohio, which shall provide notice to all successors-in-title that the property is part of the Site, that U.S. EPA selected a remedy for the Site on September 27, 2006, and that Settling Defendants have entered into a Consent Decree requiring implementation of the remedy. Such notice(s) shall identify the United States District Court in which the Consent Decree was filed, the name and civil action number of this case, and the date the Consent Decree was entered by the Court. Settling Defendants shall record the notice(s) within 10 days of U.S. EPA's approval of the notice(s). Settling Defendants shall provide U.S. EPA with a certified copy of the recorded notice(s) within 10 days after receiving a copy of the recorded notice from the Register of Deeds.

b. At least 30 days prior to the conveyance of any interest in property located within the Site including, but not limited to, fee interests, leasehold interests, and mortgage interests, Settling Defendants conveying the interest shall give the grantee written notice of (i) this Consent Decree, (ii) any instrument by which an interest in real property has been conveyed that confers a right of access to the Site (hereinafter referred to as "access easements") pursuant to Section IX (Access and Institutional Controls), and (iii) any instrument by which an interest in real property has been conveyed that confers a right to enforce restrictions on the use of such property (hereinafter referred to as "restrictive easements") pursuant to Section IX (Access and Institutional Controls). At least 30 days prior to such conveyance, Settling Defendants conveying the interest shall also give written notice to U.S. EPA and the State of the proposed conveyance, including the name and address of the grantee, and the date on which notice of the Consent Decree, access easements, and/or restrictive easements was given to the grantee.

c. In the event of any such conveyance, Settling Defendants' obligations under this Consent Decree, including, but not limited to, their obligation to provide or secure access and institutional controls, as well as to abide by such institutional controls, pursuant to Section IX (Access and Institutional Controls) of this Consent Decree, shall continue to be met by Settling Defendants. In no event shall the conveyance release or otherwise affect the liability of Settling Defendants to comply with all provisions of this Consent Decree, absent the prior written consent of U.S. EPA. If the United States approves, the grantee may perform some or all of the Work under this Consent Decree.

VI. PERFORMANCE OF THE WORK BY SETTLING DEFENDANTS

10. Selection of Supervising Consultant/Engineer

a. All aspects of the Work to be performed by Settling Defendants pursuant to Sections VI (Performance of the Work by Settling Defendants), VII (Remedy Review), VIII (Quality Assurance, Sampling and Data Analysis), and XV (Emergency Response) of this Consent Decree shall be under the direction and supervision of the Supervising Consultant/Engineer, the selection of which shall be subject to disapproval by U.S. EPA after a reasonable opportunity for review and comment by the State. Within 30 days after the entry of this Consent Decree, Settling Defendants shall notify U.S. EPA in writing of the name, title, and qualifications of any contractor proposed to be the Supervising Consultant/Engineer. With respect to any contractor proposed to be Supervising Consultant/Engineer, Settling Defendants shall demonstrate that the proposed contractor has a quality system that complies with ANSI/ASQC E4-1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs," (American National Standard, January 5, 1995), by submitting a copy of the proposed contractor's Quality Management Plan

(QMP). The QMP should be prepared in accordance with "U.S. EPA Requirements for Quality Management Plans (QA/R-2)" (U.S. EPA/240/B-01/002, March 2001) or equivalent documentation as determined by U.S. EPA. U.S. EPA will issue a notice of disapproval or an authorization to proceed. If at any time thereafter, Settling Defendants propose to change a Supervising Consultant/Engineer, Settling Defendants shall give such notice to U.S. EPA and must obtain an authorization to proceed from U.S. EPA before the new Supervising Consultant/Engineer performs, directs, or supervises any Work under this Consent Decree.

b. If U.S. EPA disapproves a proposed Supervising Consultant/Engineer, U.S. EPA shall notify Settling Defendants in writing. Settling Defendants shall submit to U.S. EPA a list of Potential Supervising Consultants/Engineers including the qualifications of each contractor, that would be acceptable to them within 30 days of receipt of U.S. EPA's disapproval of the Potential Supervising Consultant/Engineer previously proposed. U.S. EPA will provide written notice of the names of any contractor(s) that it disapproves and an authorization to proceed with respect to any of the other contractors as the Supervising Consultant/Engineer. Settling Defendants may select any contractor from that list that is not disapproved and shall notify U.S. EPA of the name of the Supervising Consultant/Engineer selected within 21 days of U.S. EPA's authorization to proceed.

c. If U.S. EPA fails to provide written notice of its authorization to proceed or disapproval as provided in this Paragraph and this failure prevents Settling Defendants from meeting one or more deadlines in a plan approved by the U.S. EPA pursuant to this Consent Decree, Settling Defendants may seek relief under the provisions of Section XVIII (Force Majeure) hereof.

11. Remedial Design.

a. Within 120 days after U.S. EPA's issuance of an authorization to proceed pursuant to Paragraph 10, Settling Defendants shall submit to U.S. EPA and the State a work plan for the design of the Remedial Action at the Site ("Remedial Design Work Plan" or "RD Work Plan"). The Remedial Design Work Plan shall provide for design of the remedy set forth in the ROD, in accordance with the SOW and for achievement of the Performance Standards and other requirements set forth in the ROD, this Consent Decree and/or the SOW. Upon its approval by U.S. EPA, the Remedial Design Work Plan shall be incorporated into and become enforceable under this Consent Decree. Within 30 days after U.S. EPA's issuance of an authorization to proceed, Settling Defendants shall submit to U.S. EPA and the State a Health and Safety Plan for field design activities which conforms to Occupational Safety and Health Administration and U.S. EPA requirements including, but not limited to, 29 C.F.R. § 1910.120.

b. The Remedial Design Work Plan shall include plans and schedules for implementation of all remedial design and pre-design tasks identified in the SOW. In addition, the Remedial Design Work Plan shall include a schedule for completion of the Remedial Action Work Plan.

c. Upon approval of the Remedial Design Work Plan by U.S. EPA, after a reasonable opportunity for review and comment by the State, and submittal of the Health and Safety Plan for all field activities to U.S. EPA and the State, Settling Defendants shall implement the Remedial Design Work Plan. Settling Defendants shall submit to U.S. EPA and the State all plans, submittals and other deliverables required under the approved Remedial Design Work Plan in accordance with the approved schedule for review and approval pursuant to Section XI (U.S. EPA Approval of Plans and Other Submissions). Except as otherwise directed by

U.S. EPA, Settling Defendants shall not commence further Remedial Design activities at the Site prior to approval of the Remedial Design Work Plan, unless Settling Defendants submit a supplemental Plan for review and approval by U.S. EPA.

d. The preliminary design submittal shall include, at a minimum, the following: (1) design criteria; (2) results of treatability studies; (3) results of additional field sampling and pre-design work; (4) project delivery strategy; (5) preliminary plans, drawings and sketches; (6) required specifications in outline form; and (7) preliminary construction schedule.

e. The intermediate design submittal, if required by U.S. EPA or if independently submitted by Settling Defendants, shall be a continuation and expansion of the preliminary design. Any value engineering proposals must be identified and evaluated during this review.

f. The pre-final/final design submittal shall include, at a minimum, the following: (1) final plans and specifications; (2) Operation and Maintenance Plan; (3) Construction Quality Assurance Project Plan ("CQAPP"); (4) Field Sampling Plan (directed at measuring progress towards meeting Performance Standards); and (5) Contingency Plan. The CQAPP, which shall detail the approach to quality assurance during construction activities at the Site, shall specify a quality assurance official ("QA Official"), independent of the Supervising Consultant/Engineer, to conduct a quality assurance program during the construction phase of the project.

12. Remedial Action.

a. Within 30 days after the approval of the final design submittal, Settling Defendants shall submit to U.S. EPA and the State a work plan for the performance of the Remedial Action at the Site ("Remedial Action Work Plan"). The Remedial Action Work Plan shall provide for construction and implementation of the remedy set forth in the ROD and achievement of the Performance Standards, in accordance with this Consent Decree, the ROD, the SOW, and the design plans and specifications developed in accordance with the Remedial Design Work Plan and approved by U.S. EPA. Upon its approval by U.S. EPA, the Remedial Action Work Plan shall be incorporated into and become enforceable under this Consent Decree. At the same time as they submit the Remedial Action Work Plan, Settling Defendants shall submit to U.S. EPA and the State a Health and Safety Plan for field activities required by the Remedial Action Work Plan which conforms to Occupational Safety and Health Administration and U.S. EPA requirements including, but not limited to, 29 C.F.R. § 1910.120.

b. The Remedial Action Work Plan shall include the following:

- (1) schedule for completion of the Remedial Action;
- (2) method for selection of the contractor;
- (3) schedule for developing and submitting other required Remedial Action plans;
- (4) groundwater monitoring plan;
- (5) methods for satisfying permitting requirements;
- (6) methodology for implementation of the Operation and Maintenance Plan;
- (7) methodology for implementation of the Contingency Plan;
- (8) tentative formulation of the Remedial Action team;
- (9) construction quality control plan (by constructor); and
- (10) procedures and plans for the decontamination of equipment and the disposal of contaminated materials.

The Remedial Action Work Plan also shall include the methodology for implementation of the Construction Quality Assurance Plan and a schedule for implementation of all Remedial Action tasks identified in the final design submittal and shall identify the initial formulation of the Settling Defendants' Remedial Action Project Team (including, but not limited to, the Supervising Consultant/Engineer).

c. Upon approval of the Remedial Action Work Plan by U.S. EPA, after a reasonable opportunity for review and comment by the State, Settling Defendants shall implement the activities required under the Remedial Action Work Plan. Settling Defendants shall submit to U.S. EPA and the State all plans, submittals, or other deliverables required under the approved Remedial Action Work Plan in accordance with the approved schedule for review and approval pursuant to Section XI (U.S. EPA Approval of Plans and Other Submissions). Unless otherwise directed by U.S. EPA, Settling Defendants shall not commence physical Remedial Action activities at the Site prior to approval of the Remedial Action Work Plan.

13. Settling Defendants shall continue to implement the Remedial Action and O&M until the Performance Standards are achieved and for so long thereafter as is otherwise required under this Consent Decree.

14. Modification of the SOW or Related Work Plans.

a. If U.S. EPA determines that modification to the work specified in the SOW and/or in work plans developed pursuant to the SOW is necessary to achieve and maintain the Performance Standards or to carry out and maintain the effectiveness of the remedy set forth in the ROD, U.S. EPA may require that such modification be incorporated in the SOW and/or such work plans, provided, however, that a modification may only be required pursuant to this Paragraph to the extent that it is consistent with the scope of the remedy selected in the ROD.

b. For the purposes of this Paragraph 14 and Paragraph 53 and 54 only, the "scope of the remedy selected in the ROD" is: surface cover enhancement, hot spot removal, and imposition of institutional controls and future monitoring that will address contaminated soils/sediments, a source area, and groundwater.

c. If Settling Defendants object to any modification determined by U.S. EPA to be necessary pursuant to this Paragraph, they may seek dispute resolution pursuant to Section XIX (Dispute Resolution), Paragraph 70 (record review). The SOW and/or related work plans shall be modified in accordance with final resolution of the dispute.

d. Settling Defendants shall implement any work required by any modifications incorporated in the SOW and/or in work plans developed pursuant to the SOW in accordance with this Paragraph.

e. Nothing in this Paragraph shall be construed to limit U.S. EPA's authority to require performance of further response actions as otherwise provided in this Consent Decree.

15. Settling Defendants acknowledge and agree that nothing in this Consent Decree, the SOW, or the Remedial Design or Remedial Action Work Plans constitutes a warranty or representation of any kind by Plaintiff that compliance with the work requirements set forth in the SOW and the Work Plans will achieve the Performance Standards.

16. If Settling Defendants propose any off-Site shipment of Waste Material, Settling Defendants shall, prior to the first off-Site shipment of Waste Material from the Site to an out-of-state waste management facility, provide written notification to the appropriate state environmental official in the receiving facility's state and to the U.S. EPA Project Coordinator of such shipment of Waste Material. However, this notification requirement shall not apply to any off-Site shipments when the total volume of all such shipments will not exceed 10 cubic yards.

a. Settling Defendants shall include in the written notification the following information, where available: (1) the name and location of the facility to which the Waste

Material is to be shipped; (2) the type and quantity of the Waste Material to be shipped; (3) the expected schedule for the shipment of the Waste Material; and (4) the method of transportation. Settling Defendants shall notify the state in which the planned receiving facility is located of major changes in the shipment plan, such as a decision to ship the Waste Material to another facility within the same state, or to a facility in another state.

b. The identity of the receiving facility and state will be determined by Settling Defendants following the award of the contract for Remedial Action construction. Settling Defendants shall provide the information required by Paragraph 16 as soon as practicable after the award of the contract and prior to the actual shipment of the Waste Material.

c. Prior to shipping any hazardous substances, pollutants, or contaminants from the Site to an off-site location, Settling Defendants shall obtain U.S. EPA's certification that the proposed receiving facility is operating in compliance with the requirements of CERCLA Section 121(d)(3) and 40 C.F.R. 300.440. Settling Defendants shall only send hazardous substances, pollutants, or contaminants from the Site to an off-Site facility that complies with the requirements of the statutory provision and regulations cited in the preceding sentence.

VII. REMEDY REVIEW

17. Periodic Review. Subject to their right to challenge U.S. EPA's request under Paragraph 70, Settling Defendants shall conduct studies and investigations as requested by U.S. EPA, in order to permit U.S. EPA to conduct reviews of whether the Remedial Action is protective of human health and the environment at least every five years as required by Section 121(c) of CERCLA and any applicable regulations.

18. U.S. EPA Selection of Further Response Actions. If U.S. EPA determines, at any time, that the Remedial Action is not protective of human health and the environment, U.S. EPA may select further response actions for the Site in accordance with the requirements of CERCLA and the NCP.

19. Opportunity To Comment. Settling Defendants and, if required by Sections 113(k)(2) or 117 of CERCLA, the public, will be provided with an opportunity to comment on any further response actions proposed by U.S. EPA as a result of the review conducted pursuant to Section 121(c) of CERCLA and to submit written comments for the record during the comment period.

20. Settling Defendants' Obligation To Perform Further Response Actions. If U.S. EPA selects further response actions for the Site, Settling Defendants shall undertake such further response actions to the extent that the reopener conditions in Paragraph 85 or Paragraph 86 (United States' reservations of liability based on unknown conditions or new information) are satisfied. Settling Defendants may invoke the procedures set forth in Section XIX (Dispute Resolution) to dispute (1) U.S. EPA's determination that the reopener conditions of Paragraph 85 or Paragraph 86 of Section XXI (Covenants Not To Sue by Plaintiff) are satisfied, (2) U.S. EPA's determination that the Remedial Action is not protective of human health and the environment, or (3) U.S. EPA's selection of the further response actions. Disputes pertaining to the whether the Remedial Action is protective or to U.S. EPA's selection of further response actions shall be resolved pursuant to Paragraph 70 (record review).

21. Submissions of Plans. If Settling Defendants are required to perform the further response actions pursuant to Paragraph 20 they shall submit a plan for such work to U.S. EPA

for approval in accordance with the procedures set forth in Section VI (Performance of the Work by Settling Defendants) and shall implement the plan approved by U.S. EPA in accordance with the provisions of this Consent Decree.

VIII. QUALITY ASSURANCE, SAMPLING, AND DATA ANALYSIS

22. Settling Defendants shall use quality assurance, quality control, and chain of custody procedures for all pre-design, design, compliance and monitoring samples in accordance with "U.S. EPA Requirements for Quality Assurance-Project Plans (QA/R5)" (U.S. EPA/240/B-01/003, March 2001) "Guidance for Quality Assurance Project Plans (QA/G-5)" (U.S. EPA/600/R-98/018, Feb. 1998), the UFP-QAPP format found at <http://www.epa.gov/fedfac/documents/qualityassurance.htm> and subsequent amendments to such guidelines upon notification by U.S. EPA to Settling Defendants of such amendment. Amended guidelines shall apply only to procedures conducted after such notification. Prior to the commencement of any monitoring project under this Consent Decree, Settling Defendants shall submit to U.S. EPA for approval, after a reasonable opportunity for review and comment by the State, a Quality Assurance Project Plan ("QAPP") that is consistent with the SOW, the NCP and applicable guidance documents. If relevant to the proceeding, the Parties agree that validated sampling data generated in accordance with the QAPP(s) and reviewed and approved by U.S. EPA shall be admissible as evidence, without objection, in any proceeding under this Decree. Settling Defendants shall ensure that U.S. EPA personnel and its authorized representatives are allowed access at reasonable times to all laboratories utilized by Settling Defendants in implementing this Consent Decree. In addition, Settling Defendants shall ensure that such laboratories shall analyze all samples submitted by U.S. EPA pursuant to the QAPP for quality assurance monitoring. Settling Defendants shall ensure that the laboratories they utilize for the analysis of samples taken pursuant to this Decree perform all analyses according to accepted U.S. EPA methods. Accepted U.S. EPA methods consist of those methods which are documented in the "Contract Lab Program Statement of Work for Inorganic Analysis" and the "Contract Lab Program Statement of Work for Organic Analysis," dated February 1988, and any amendments made thereto during the course of the implementation of this Decree; however, upon approval by U.S. EPA, after opportunity for review and comment by the State, Settling Defendants may use other analytical methods which are as stringent as or more stringent than the CLP- approved methods. Settling Defendants shall ensure that all laboratories they use for analysis of samples taken pursuant to this Consent Decree participate in an U.S. EPA or U.S. EPA-equivalent QA/QC program. Settling Defendants shall only use laboratories that have a documented Quality System which complies with ANSI/ASQC E4-1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs," (American National Standard, January 5, 1995), and "U.S. EPA Requirements for Quality Management Plans (QA/R-2)," (U.S. EPA/240/B-01/002, March 2001) or equivalent documentation as determined by U.S. EPA. U.S. EPA may consider laboratories accredited under the National Environmental Laboratory Accreditation Program (NELAP) as meeting the Quality System requirements. Settling Defendants shall ensure that all field methodologies utilized in collecting samples for subsequent analysis pursuant to this Decree will be conducted in accordance with the procedures set forth in the QAPP approved by U.S. EPA.

23. Upon request, Settling Defendants shall allow split or duplicate samples to be taken by U.S. EPA or their authorized representatives. Settling Defendants shall notify U.S. EPA not less than 28 days in advance of any sample collection activity unless shorter notice is agreed to by U.S. EPA. In addition, U.S. EPA shall have the right to take any additional

samples that U.S. EPA deems necessary. Upon request, U.S. EPA shall allow Settling Defendants to take split or duplicate samples of any samples it takes as part of the Plaintiff's oversight of Settling Defendants' implementation of the Work.

24. Settling Defendants shall submit to U.S. EPA and the State three copies of the results of all sampling and/or tests or other data obtained or generated by or on behalf of Settling Defendants with respect to the Site and/or the implementation of this Consent Decree unless U.S. EPA agrees otherwise. U.S. EPA shall likewise provide to Settling Defendants the results of all sampling and/or tests or other data obtained or generated by or on behalf of U.S. EPA.

25. Notwithstanding any provision of this Consent Decree, the United States hereby retains all of its information gathering and inspection authorities and rights, including enforcement actions related thereto, under CERCLA, RCRA and any other applicable statutes or regulations.

IX. ACCESS AND INSTITUTIONAL CONTROLS

26. If the Site, or any other property where access and/or land/water use restrictions are needed to implement this Consent Decree, is owned or controlled by any of the Settling Defendants, such Settling Defendant(s) shall:

a. commencing on the date of lodging of this Consent Decree, provide access at all reasonable times to the Site, or such other property, to allow Settling Defendants and their contractors to complete their obligations under this Consent Decree, and to the United States and its representatives, including U.S. EPA and its contractors, with access at all reasonable times to the Site, or such other property, for the purpose of conducting any activity related to this Consent Decree including, but not limited to, the following activities:

- (1) Monitoring the Work;
- (2) Verifying any data or information submitted to the United States or the State;
- (3) Conducting investigations relating to contamination at or near the Site;
- (4) Obtaining samples;
- (5) Assessing the need for, planning, or implementing additional response actions at or near the Site;
- (6) Assessing implementation of quality assurance and quality control practices as defined in the approved Quality Assurance Project Plans;
- (7) Implementing the Work pursuant to the conditions set forth in Paragraph 89 of this Consent Decree;
- (8) Inspecting and copying records, operating logs, contracts, or other documents maintained or generated by Settling Defendants or their agents, consistent with Section XXIV (Access to Information);
- (9) Assessing Settling Defendants' compliance with this Consent Decree; and

(10) Determining whether the Site or other property is being used in a manner that is prohibited or restricted, or that may need to be prohibited or restricted, by or pursuant to this Consent Decree;

b. commencing on the date of lodging of this Consent Decree, refrain from using the Site, or such other property, in any manner that would interfere with or adversely affect the implementation, integrity, or protectiveness of the remedial measures to be performed pursuant to this Consent Decree. Such restrictions include, but are not limited to:

i. the prohibition of extraction of groundwater at the Site for any purpose other than to implement the Remedial Action and Operation and Maintenance pursuant to this Consent Decree;

ii. the prohibition of digging, excavation, construction or other activity that could or would interfere with, or adversely affect, the integrity of any engineering control implemented as part of the Remedial Action at the Site;

iii. at U.S. EPA's request, execute and record a restrictive covenant authorized by and that complies with the form and content contained in Sections 5301.80 to 5301.92 of the Ohio Revised Code for implementation of institutional controls that are required to assure continued protection of human health and the environment or the integrity of the remedial action;

iv. any other land/water use restrictions set forth in the approved O&M Work Plan; and

c. execute and record in the Recorder's Office of Lorain County, State of Ohio, an easement, running with the land, that (i) grants a right of access for the purpose of conducting any activity related to this Consent Decree including, but not limited to, those activities listed in Paragraph 26.a of this Consent Decree, and (ii) grants the right to enforce the land/water use restrictions listed in Paragraph 26.b of this Consent Decree, or other restrictions that U.S. EPA determines are necessary to implement, ensure non-interference with, or ensure the protectiveness of the remedial measures to be performed pursuant to this Consent Decree. Such Settling Defendant(s) shall grant the access rights and the rights to enforce the land/water use restrictions to (i) the United States, on behalf of U.S. EPA, and its representatives, (ii) the State and its representatives, (iii) the other Settling Defendants and their representatives, and/or (iv) other appropriate grantees. Such Settling Defendant(s) shall, within 45 days of entry of this Consent Decree, submit to U.S. EPA for review and approval with respect to such property:

1. A draft easement, in substantially the form to be provided by U.S. EPA, that is enforceable under the laws of the State of Ohio, and

2. a current title insurance commitment or some other evidence of title acceptable to U.S. EPA, which shows title to the land described in the easement to be free and clear of all prior liens and encumbrances (except when those liens or encumbrances are approved by U.S. EPA or when, despite best efforts, Settling Defendant(s) are unable to obtain release or subordination of such prior liens or encumbrances).

d. Within 15 days of U.S. EPA's approval and acceptance of the easement and the title evidence, such Settling Defendant(s) shall update the title search and, if it is determined that nothing has occurred since the effective date of the commitment to affect the title adversely, record the easement with the Recorder's Office of Lorain County. Within 30 days

of recording the easement, such Settling Defendant(s) shall provide U.S. EPA with a final title insurance policy, or other final evidence of title acceptable to U.S. EPA, and a certified copy of the original recorded easement showing the clerk's recording stamps. If the easement is to be conveyed to the United States, the easement and title evidence (including final title evidence) shall be prepared in accordance with the U.S. Department of Justice Title Standards 2001, and approval of the sufficiency of title must be obtained as required by 40 U.S.C. § 3111.

27. For purposes of Paragraphs 26 and 28 of this Consent Decree, "best efforts" includes the payment of reasonable sums of money in consideration of access, access easements, land/water use restrictions, restrictive easements, and/or an agreement to release or subordinate a prior lien or encumbrance.

28. If the Site, or any other property where access and/or land/water use restrictions are needed to implement this Consent Decree, is owned or controlled by persons other than any of Settling Defendants, Settling Defendants shall use best efforts to secure from such persons:

a. an agreement to provide access thereto for Settling Defendants, as well as for the United States on behalf of U.S. EPA, and the State, as well as their representatives (including contractors), for the purpose of conducting any activity related to this Consent Decree including, but not limited to, those activities listed in Paragraph 26.a of this Consent Decree;

b. an agreement, enforceable by Settling Defendants and the United States, to refrain from using the Site, or such other property, in any manner that would interfere with or adversely affect the implementation, integrity, or protectiveness of the remedial measures to be performed pursuant to this Consent Decree. Such restrictions include, but are not limited to

i. the prohibition of extraction of groundwater at the Site for any purpose other than to implement the Remedial Action and Operation and Maintenance pursuant to this Consent Decree;

ii. the prohibition of digging, excavation, construction or other activity that could or would interfere with, or adversely affect, the integrity of any engineering control implemented as part of the Remedial Action at the Site;

iii. at U.S. EPA's request, execute and record a restrictive covenant authorized by and that complies with the form and content contained in Sections 5301.80 to 5301.92 of the Ohio Revised Code for implementation of institutional controls that are required to assure continued protection of human health and the environment or the integrity of the remedial action;

iv. any other land/water use restrictions set forth in the approved O & M Work Plan; and

c. the execution and recordation in the Recorder's Office of Lorain County, State of Ohio, of an easement, running with the land, that (i) grants a right of access for the purpose of conducting any activity related to this Consent Decree including, but not limited to, those activities listed in Paragraph 26.a of this Consent Decree, and (ii) grants the right to enforce the land/water use restrictions listed in Paragraph 26.b of this Consent Decree, or other restrictions that U.S. EPA determines are necessary to implement, ensure non-interference with, or ensure the protectiveness of the remedial measures to be performed pursuant to this Consent Decree. The access rights and/or rights to enforce land/water use restrictions shall be granted to (i) the United States, on behalf of U.S. EPA, and its representatives, (ii) the State and its representatives, (iii) Settling Defendants and their representatives, and/or (iv) other appropriate

grantees. Within 45 days of entry of this Consent Decree, Settling Defendants shall submit to U.S. EPA for review and approval with respect to such property:

(1) A draft easement, in substantially the form to be provided by U.S. EPA, that is enforceable under the laws of the State of Ohio, and

(2) a current title insurance commitment, or some other evidence of title acceptable to U.S. EPA, which shows title to the land described in the easement to be free and clear of all prior liens and encumbrances (except when those liens or encumbrances are approved by U.S. EPA or when, despite best efforts, Settling Defendants are unable to obtain release or subordination of such prior liens or encumbrances)

d. Within 15 days of U.S. EPA's approval and acceptance of the easement and the title evidence, Settling Defendants shall update the title search and, if it is determined that nothing has occurred since the effective date of the commitment to affect the title adversely, the easement shall be recorded with the Recorder's Office of Lorain County. Within 30 days of the recording of the easement, Settling Defendants shall provide U.S. EPA with a final title insurance policy, or other final evidence of title acceptable to U.S. EPA, and a certified copy of the original recorded easement showing the clerk's recording stamps. If easement is to be conveyed to the United States, the easement and title evidence (including final title evidence) shall be prepared in accordance with the U.S. Department of Justice Title Standards 2001, and approval of the sufficiency of title must be obtained as required by 40 U.S.C. § 3111.

29. If (a) any access or land/water use restriction agreements required by Paragraphs 28.a or 28.b of this Consent Decree are not obtained within 45 days of the date of entry of this Consent Decree, or (b) any access easements or restrictive easements required by Paragraph 28.c of this Consent Decree are not submitted to U.S. EPA in draft form within 45 days of the date of entry of this Consent Decree, or (c) Settling Defendants are unable to obtain an agreement pursuant to Paragraph 26.c.(1) or Paragraph 28.c.(1) from the holder of a prior lien or encumbrance to release or subordinate such lien or encumbrance to the easement being created pursuant to this consent decree within 45 days of the date of entry of this consent decree, Settling Defendants shall promptly notify the United States in writing, and shall include in that notification a summary of the steps that Settling Defendants have taken to attempt to comply with Paragraph 26 or 28 of this Consent Decree. The United States may, as it deems appropriate, assist Settling Defendants in obtaining access or land/water use restrictions, either in the form of contractual agreements or in the form of easements running with the land, or in obtaining the release or subordination of a prior lien or encumbrance. Settling Defendants shall reimburse the United States in accordance with the procedures in Section XVI (Payment For Response Costs), for all costs incurred, direct or indirect, by the United States in obtaining such access, land/water use restrictions, and/or the release/subordination of prior liens or encumbrances including, but not limited to, the cost of attorney time and the amount of monetary consideration paid or just compensation.

30. If U.S. EPA determines that land/water use restrictions in the form of state or local laws, regulations, ordinances or other governmental controls are needed to implement the remedy selected in the ROD, ensure the integrity and protectiveness thereof, or ensure non-interference therewith, Settling Defendants shall cooperate with U.S. EPA's and the State's efforts to secure such governmental controls.

31. Notwithstanding any provision of this Consent Decree, the United States retains all of its access authorities and rights, as well as all of its rights to require land/water use

restrictions, including enforcement authorities related thereto, under CERCLA, RCRA and any other applicable statute or regulations.

X. REPORTING REQUIREMENTS

32. In addition to any other requirement of this Consent Decree, Settling Defendants shall submit to U.S. EPA and the State one (1) copy of written monthly progress reports that: (a) describe the actions which have been taken toward achieving compliance with this Consent Decree during the previous month; (b) include a summary of all results of sampling and tests and all other data received or generated by Settling Defendants or their contractors or agents in the previous month; (c) identify all work plans, plans and other deliverables required by this Consent Decree completed and submitted during the previous month; (d) describe all actions, including, but not limited to, data collection and implementation of work plans, which are scheduled for the next month and provide other information relating to the progress of construction; (e) include information regarding percentage of completion, unresolved delays encountered or anticipated that may affect the future schedule for implementation of the Work, and a description of efforts made to mitigate those delays or anticipated delays; (f) include any modifications to the work plans or other schedules that Settling Defendants have proposed to U.S. EPA or that have been approved by U.S. EPA; and (g) describe all activities undertaken in support of the Community Relations Plan during the previous month and those to be undertaken in the next month. Settling Defendants shall submit these progress reports to U.S. EPA and the State by the 10th day of every month following the lodging of this Consent Decree until U.S. EPA notifies Settling Defendants pursuant to Paragraph 53.b or 54.b of Section XIV (Certification of Completion). Upon written request, U.S. EPA may approve a reduction in the frequency of the progress reports and a new due date. If requested by U.S. EPA, Settling Defendants shall also provide briefings for U.S. EPA to discuss the progress of the Work.

33. Settling Defendants shall notify U.S. EPA of any change in the schedule described in the monthly progress report for the performance of any activity, including, but not limited to, data collection and implementation of work plans, no later than seven days prior to the performance of the activity.

34. Upon the occurrence of any event during performance of the Work that Settling Defendants are required to report pursuant to Section 103 of CERCLA or Section 304 of the Emergency Planning and Community Right-to-know Act (EPCRA), Settling Defendants shall within 48 hours of the onset of such event orally notify the U.S. EPA Project Coordinator or the Alternate U.S. EPA Project Coordinator (in the event of the unavailability of the U.S. EPA Project Coordinator), or, in the event that neither the U.S. EPA Project Coordinator or Alternate U.S. EPA Project Coordinator is available, the Emergency Response Section, Region 5, United States Environmental Protection Agency. These reporting requirements are in addition to the reporting required by CERCLA Section 103 or EPCRA Section 304.

35. Within 20 days of the onset of such an event, Settling Defendants shall furnish to Plaintiff a written report, signed by Settling Defendants' Project Coordinator, setting forth the events which occurred and the measures taken, and to be taken, in response thereto. Within 30 days of the conclusion of such an event, Settling Defendants shall submit a report setting forth all actions taken in response thereto.

36. Settling Defendants shall submit three copies of all plans, reports, and data required by the SOW, the Remedial Design Work Plan, the Remedial Action Work Plan, or any other approved plans to U.S. EPA in accordance with the schedules set forth in such plans.

Settling Defendants shall simultaneously submit one copy of all such plans, reports and data to the State. Upon request by U.S. EPA Settling Defendants shall submit in electronic form all portions of any report or other deliverable Settling Defendants are required to submit pursuant to the provisions of this Consent Decree.

37. All reports and other documents submitted by Settling Defendants to U.S. EPA (other than the monthly progress reports referred to above) which purport to document Settling Defendants' compliance with the terms of this Consent Decree shall be signed by an authorized representative of Settling Defendants.

XI. U.S. EPA APPROVAL OF PLANS AND OTHER SUBMISSIONS

38. After review of any plan, report or other item which is required to be submitted for approval pursuant to this Consent Decree, U.S. EPA, after reasonable opportunity for review and comment by the State, shall: (a) approve, in whole or in part, the submission; (b) approve the submission upon specified conditions; (c) modify the submission to cure the deficiencies; (d) disapprove, in whole or in part, the submission, directing that Settling Defendants modify the submission; or (e) any combination of the above. However, U.S. EPA shall not modify a submission without first providing Settling Defendants at least one notice of deficiency and an opportunity to cure within 60 days, except where to do so would cause serious disruption to the Work or where previous submission(s) have been disapproved due to material defects and the deficiencies in the submission under consideration indicate a bad faith lack of effort to submit an acceptable deliverable.

39. In the event of approval, approval upon conditions, or modification by U.S. EPA, pursuant to Paragraph 38(a), (b), or (c), Settling Defendants shall proceed to take any action required by the plan, report, or other item, as approved or modified by U.S. EPA subject only to their right to invoke the Dispute Resolution procedures set forth in Section XIX (Dispute Resolution) with respect to the modifications or conditions made by U.S. EPA. In the event that U.S. EPA modifies the submission to cure the deficiencies pursuant to Paragraph 38(c) and the submission has a material defect, U.S. EPA retains its right to seek stipulated penalties, as provided in Section XX (Stipulated Penalties).

40. Resubmission of Plans.

Upon receipt of a notice of disapproval pursuant to Paragraph 38(d), Settling Defendants shall, within 45 days or such longer time as specified by U.S. EPA in such notice, correct the deficiencies and resubmit the plan, report, or other item for approval. Any stipulated penalties applicable to the submission, as provided in Section XX, shall accrue during the 45-day period or otherwise specified period but shall not be payable unless the resubmission is disapproved or modified due to a material defect as provided in Paragraphs 41 and 42.

Notwithstanding the receipt of a notice of disapproval pursuant to Paragraph 38(d), Settling Defendants shall proceed, at the direction of U.S. EPA, to take any action required by any non-deficient portion of the submission. Implementation of any non-deficient portion of a submission shall not relieve Settling Defendants of any liability for stipulated penalties under Section XX (Stipulated Penalties).

41. In the event that a resubmitted plan, report or other item, or portion thereof, is disapproved by U.S. EPA, U.S. EPA may again require Settling Defendants to correct the deficiencies, in accordance with the preceding Paragraphs. U.S. EPA also retains the right to modify or develop the plan, report or other item. Settling Defendants shall implement any such

plan, report, or item as modified or developed by U.S. EPA, subject only to their right to invoke the procedures set forth in Section XIX (Dispute Resolution).

42. If upon resubmission, a plan, report, or item is disapproved or modified by U.S. EPA due to a material defect, Settling Defendants shall be deemed to have failed to submit such plan, report, or item timely and adequately unless Settling Defendants invoke the dispute resolution procedures set forth in Section XIX (Dispute Resolution) and U.S. EPA's action is overturned pursuant to that Section. The provisions of Section XIX (Dispute Resolution) and Section XX (Stipulated Penalties) shall govern the implementation of the Work and accrual and payment of any stipulated penalties during Dispute Resolution. If U.S. EPA's disapproval or modification is upheld, stipulated penalties shall accrue for such violation from the date on which the initial submission was originally required, as provided in Section XX.

43. All plans, reports, and other items required to be submitted to U.S. EPA under this Consent Decree shall, upon approval or modification by U.S. EPA, be enforceable under this Consent Decree. In the event U.S. EPA approves or modifies a portion of a plan, report, or other item required to be submitted to U.S. EPA under this Consent Decree, the approved or modified portion shall be enforceable under this Consent Decree.

XII. PROJECT COORDINATORS

44. Within 20 days of entry of this Consent Decree, Settling Defendants and U.S. EPA will notify each other, in writing, of the name, address and telephone number of their respective designated Project Coordinators and Alternate Project Coordinators. If a Project Coordinator or Alternate Project Coordinator initially designated is changed, the identity of the successor will be given to the other Parties at least 5 working days before the changes occur, unless impracticable, but in no event later than the actual day the change is made. Settling Defendants' Project Coordinator shall be subject to disapproval by U.S. EPA and shall have the technical expertise sufficient to adequately oversee all aspects of the Work. Settling Defendants' Project Coordinator shall not be an attorney for any Settling Defendants in this matter. He or she may assign other representatives, including other contractors, to serve as a Site representative for oversight of performance of daily operations during remedial activities.

45. Plaintiff may designate other representatives, including, but not limited to, U.S. EPA and State employees, and federal contractors and consultants, to observe and monitor the progress of any activity undertaken pursuant to this Consent Decree. U.S. EPA's Project Coordinator and Alternate Project Coordinator shall have the authority lawfully vested in a Remedial Project Manager (RPM) and an On-Scene Coordinator (OSC) by the National Contingency Plan, 40 C.F.R. Part 300. In addition, U.S. EPA's Project Coordinator or Alternate Project Coordinator shall have authority, consistent with the National Contingency Plan, to halt any Work required by this Consent Decree and to take any necessary response action when s/he determines that conditions at the Site constitute an emergency situation or may present an immediate threat to public health or welfare or the environment due to release or threatened release of Waste Material.

46. U.S. EPA's Project Coordinator and Settling Defendants' Project Coordinator will periodically meet in person or by telephone at a frequency commensurate with the project schedule.

XIII. PERFORMANCE GUARANTEE

47. In order to ensure the full and final completion of the Work, each Settling Defendant shall establish and maintain a Performance Guarantee for the benefit of U.S. EPA such that the aggregate amount of all such Performance Guarantees is \$3,400,000 (hereinafter "Estimated Cost of the Work"), in one or more of the following forms, which must be satisfactory in form and substance to U.S. EPA (and which must include performance guarantees in the aggregate amount of \$1,500,000 in one or more of the forms described in Subparagraphs a, b, or f, below):

a. A surety bond unconditionally guaranteeing payment and/or performance of the Work that is issued by a surety company among those listed as acceptable sureties on Federal bonds as set forth in Circular 570 of the U.S. Department of the Treasury;

b. One or more irrevocable letters of credit, payable to or at the direction of U.S. EPA, that is issued by one or more financial institution(s) (i) that has the authority to issue letters of credit and (ii) whose letter-of-credit operations are regulated and examined by a U.S. Federal or State agency;

c. A policy of insurance that (i) provides U.S. EPA with acceptable rights as a beneficiary thereof; and (ii) is issued by an insurance carrier (a) that has the authority to issue insurance policies in jurisdiction(s) and (b) whose insurance operations are regulated and examined by a State agency;

d. A guarantee to perform the Work by one or more parent corporations or subsidiaries, or by one or more unrelated corporations or subsidiaries that have a substantial business relationship with Settling Defendants, as provided by 40 C.F.R. Part 264.145(f)(11);

e. A demonstration that one or more of the Settling Defendants satisfy the requirements of 40 C.F.R. Part 264.143(f);

f. A Trust Account established by Settling Defendants. Financial statements will be provided to U.S. EPA on a quarterly basis. In January and June of each year, until all RD/RA work has been completed, Settling Defendants will submit a projected cost for the next 6 months. Settling Defendants will fund the Trust Account as necessary and maintain a balance in the Trust Fund to cover all projected RD/RA costs.

48. Within 60 days after the execution of this Consent Decree by Settling Defendants, Settling Defendants will notify U.S. EPA of their selection as their respective Performance Guarantees one or more of the mechanisms described in Paragraph 47. Within 10 days after entry of this Consent Decree, Settling Defendants shall execute or otherwise finalize all instruments or other documents required in order to make the selected Performance Guarantees legally binding in a form substantially identical to the documents attached hereto as Exhibit 1, and such Performance Guarantees shall thereupon be fully effective. Within 30 days of entry of this Consent Decree, Settling Defendants shall submit all executed and/or otherwise finalized instruments or other documents required in order to make the selected Performance Guarantees legally binding to the U.S. EPA Regional Financial Management Officer in accordance with Section XXVI (Notices and Submissions) of this Consent Decree and to the United States and U.S. EPA as specified in Section XXVI.

49. If at any time during the effective period of this Consent Decree, a Settling Defendant provides a Performance Guarantee for completion of the Work by means of a

demonstration or guarantee pursuant to Paragraph 47(d) or (e) above, such Settling Defendant shall also comply with the other relevant requirements of 40 C.F.R. § 264.143(f), 40 C.F.R. § 264.151(f), and 40 C.F.R. § 264.151(h)(1) relating to these methods unless otherwise provided in this Consent Decree, including but not limited to (i) the initial submission of required financial reports and statements from the relevant entity's chief financial officer and independent certified public accountant; (ii) the annual re-submission of such reports and statements within ninety days after the close of each such entity's fiscal year; and (iii) the notification of U.S. EPA within ninety days after the close of any fiscal year in which such entity no longer satisfies the financial test requirements set forth at 40 C.F.R. § 264.143(f)(1). For purposes of the Performance Guarantee methods specified in this Section XIII, references in 40 C.F.R. Part 264, Subpart H, to "closure," "post-closure," and "plugging and abandonment" shall be deemed to refer to the Work required under this Consent Decree, and the terms "current closure cost estimate," "current post-closure cost estimate," and "current plugging and abandonment cost estimate" shall be deemed to refer to the Estimated Cost of the Work.

50. In the event that U.S. EPA determines at any time that a Performance Guarantee provided by any Settling Defendant pursuant to this Section is inadequate or otherwise no longer satisfies the requirements set forth in this Section, whether due to an increase in the estimated cost of completing the Work or for any other reason, or in the event that any Settling Defendant becomes aware of information indicating that its Performance Guarantee provided pursuant to this Section no longer satisfies the requirements set forth in this Section, Settling Defendants, within 30 days of receipt of notice of U.S. EPA's determination or, as the case may be, within 30 days of any Settling Defendant becoming aware of such information, shall obtain and present to U.S. EPA for approval a proposal for a revised or alternative form of Performance Guarantee listed in Paragraph 47 of this Consent Decree that satisfies all requirements set forth in this Section XIII. In seeking approval for a revised or alternative form of Performance Guarantee, Settling Defendants shall follow the procedures set forth in Paragraph 52(b)(2) of this Consent Decree. Settling Defendants' inability to post a Performance Guarantee for completion of the Work shall in no way excuse performance of any other requirements of this Consent Decree, including, without limitation, the obligation of Settling Defendants to complete the Work in strict accordance with the terms hereof.

51. The commencement of any Work Takeover pursuant to Paragraph 89 of this Consent Decree shall trigger U.S. EPA's right to receive the benefit of any Performance Guarantee(s) provided pursuant to Paragraph 47(a), (b), (c), (d) or (f), and at such time U.S. EPA shall have immediate access to resources guaranteed under any such Performance Guarantee(s), whether in cash or in kind, as needed to continue and complete the Work assumed by U.S. EPA under the Work Takeover. If for any reason U.S. EPA is unable to promptly secure the resources guaranteed under any such Performance Guarantee(s), whether in cash or in kind, necessary to continue and complete the Work assumed by U.S. EPA under the Work Takeover, or in the event that the Performance Guarantee involves a demonstration of satisfaction of the financial test criteria pursuant to Paragraph 47(e), Settling Defendants shall immediately upon written demand from U.S. EPA deposit into an account specified by U.S. EPA, in immediately available funds and without setoff, counterclaim, or condition of any kind, a cash amount up to but not exceeding the estimated cost of the remaining Work to be performed as of such date, as determined by U.S. EPA.

52. Modification of the Amount and/or Form of Performance Guarantee

a. Reduction of Amount of Performance Guarantee. If Settling Defendants believe that the estimated cost to complete the remaining Work has diminished below the amount set forth in Paragraph 47 above, Settling Defendants may, on any anniversary date of the entry of this Consent Decree, or at any other time agreed to by the Parties, petition U.S. EPA in writing to request a reduction in the amount of the Performance Guarantee provided pursuant to this Section so that the amount of the Performance Guarantee is equal to the estimated cost of the remaining Work to be performed. Settling Defendants shall submit a written proposal for such reduction to U.S. EPA that shall specify, at a minimum, the cost of the remaining Work to be performed and the basis upon which such cost was calculated. In seeking approval for a revised or alternative form of Performance Guarantee, Settling Defendants shall follow the procedures set forth in Paragraph 52(b)(2) of this Consent Decree. If U.S. EPA decides to accept such a proposal, U.S. EPA shall notify the petitioning Settling Defendants of such decision in writing. After receiving U.S. EPA's written acceptance, Settling Defendants may reduce the amount of the Performance Guarantee in accordance with and to the extent permitted by such written acceptance. In the event of a dispute, Settling Defendants may reduce the amount of the Performance Guarantee required hereunder only in accordance with a final administrative or judicial decision resolving such dispute. No change to the form or terms of any Performance Guarantee provided under this Section, other than a reduction in amount, is authorized except as provided in Paragraphs 50 or 52(b) of this Consent Decree.

b. Change of Form of Performance Guarantee

(1) If, after entry of this Consent Decree, Settling Defendants desire to change the form or terms of any Performance Guarantee(s) provided pursuant to this Section, Settling Defendants may, on any anniversary date of entry of this Consent Decree, or at any other time agreed to by the Parties, petition U.S. EPA in writing to request a change in the form of the Performance Guarantee provided hereunder. The submission of such proposed revised or alternative form of Performance Guarantee shall be as provided in Paragraph 52(b)(2) of this Consent Decree. Any decision made by U.S. EPA on a petition submitted under this subparagraph (b)(1) shall be made in U.S. EPA's sole and unreviewable discretion, and such decision shall not be subject to challenge by Settling Defendants pursuant to the dispute resolution provisions of this Consent Decree or in any other forum.

(2) Settling Defendants shall submit a written proposal for a revised or alternative form of Performance Guarantee to U.S. EPA which shall specify, at a minimum, the estimated cost of the remaining Work to be performed, the basis upon which such cost was calculated, and the proposed revised form of Performance Guarantee, including all proposed instruments or other documents required in order to make the proposed Performance Guarantee legally binding. The proposed revised or alternative form of Performance Guarantee must satisfy all requirements set forth or incorporated by reference in this Section. Settling Defendants shall submit such proposed revised or alternative form of Performance Guarantee to the U.S. EPA Regional Financial Management Officer in accordance with Section XXVI ("Notices and Submissions") of this Consent Decree. U.S. EPA shall notify Settling Defendants in writing of its decision to accept or reject a revised or alternative Performance Guarantee submitted pursuant to this subparagraph. Within 10 days after receiving a written decision approving the proposed revised or alternative Performance Guarantee, Settling Defendants shall execute and/or otherwise finalize all instruments or other documents required in order to make the selected Performance Guarantee(s) legally binding in a form substantially identical to the documents submitted to

U.S. EPA as part of the proposal, and such Performance Guarantee(s) shall thereupon be fully effective. Settling Defendants shall submit all executed and/or otherwise finalized instruments or other documents required in order to make the selected Performance Guarantee(s) legally binding to the U.S. EPA Regional Financial Management Officer within 30 days of receiving a written decision approving the proposed revised or alternative Performance Guarantee in accordance with Section XXVI (Notices and Submissions) of this Consent Decree and to the United States and U.S. EPA as specified in Section XXVI.

c. Release of Performance Guarantee. If Settling Defendants receive written notice from U.S. EPA in accordance with Paragraph 53 hereof that the Remedial Action has been fully and finally completed in accordance with the terms of this Consent Decree, or if U.S. EPA otherwise so notifies Settling Defendants in writing, Settling Defendants may thereafter release, cancel, or discontinue the Performance Guarantee(s) provided pursuant to this Section. Settling Defendants shall not release, cancel, or discontinue any Performance Guarantee provided pursuant to this Section except as provided in this subparagraph. In the event of a dispute, Settling Defendants may release, cancel, or discontinue the Performance Guarantee(s) required hereunder only in accordance with a final administrative or judicial decision resolving such dispute.

XIV. CERTIFICATION OF COMPLETION

53. Completion of the Remedial Action.

a. Within 90 days after Settling Defendants conclude that the Remedial Action has been fully performed and the Performance Standards have been attained, Settling Defendants shall schedule and conduct a pre-certification inspection to be attended by Settling Defendants and U.S. EPA. If, after the pre-certification inspection, Settling Defendants still believe that the Remedial Action has been fully performed and the Performance Standards have been attained, they shall submit a written report requesting certification to U.S. EPA for approval, with a copy to the State, pursuant to Section XI (U.S. EPA Approval of Plans and Other Submissions) within 30 days of the inspection. In the report, a registered professional engineer and the Settling Defendants' Project Coordinator shall state that the Remedial Action has been completed in full satisfaction of the requirements of this Consent Decree. The written report shall include as-built drawings signed and stamped by a professional engineer. The report shall contain the following statement, signed by a responsible corporate official of a Settling Defendant or the Settling Defendants' Project Coordinator:

To the best of my knowledge, after thorough investigation, I certify that the information contained in or accompanying this submission is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If, after completion of the pre-certification inspection and receipt and review of the written report, U.S. EPA, after reasonable opportunity to review and comment by the State, determines that the Remedial Action or any portion thereof has not been completed in accordance with this Consent Decree or that the Performance Standards have not been achieved, U.S. EPA will notify Settling Defendants in writing of the activities that must be undertaken by Settling Defendants pursuant to this Consent Decree to complete the Remedial Action and achieve the Performance Standards, provided, however, that U.S. EPA may only require Settling Defendants to perform such activities pursuant to this Paragraph to the extent that such activities are consistent with the

“scope of the remedy selected in the ROD,” as that term is defined in Paragraph 14.b. U.S. EPA will set forth in the notice a schedule for performance of such activities consistent with the Consent Decree and the SOW or require the Settling Defendants to submit a schedule to U.S. EPA for approval pursuant to Section XI (U.S. EPA Approval of Plans and Other Submissions). Settling Defendants shall perform all activities described in the notice in accordance with the specifications and schedules established pursuant to this Paragraph, subject to their right to invoke the dispute resolution procedures set forth in Section XIX (Dispute Resolution).

b. If U.S. EPA concludes, based on the initial or any subsequent report requesting Certification of Completion and after a reasonable opportunity for review and comment by the State, that the Remedial Action has been performed in accordance with this Consent Decree and that the Performance Standards have been achieved, U.S. EPA will so certify in writing to Settling Defendants. This certification shall constitute the Certification of Completion of the Remedial Action for purposes of this Consent Decree, including, but not limited to, Section XXI (Covenants Not to Sue by Plaintiff). Certification of Completion of the Remedial Action shall not affect Settling Defendants' obligations under this Consent Decree.

54. Completion of the Work.

a. Within 90 days after Settling Defendants conclude that all phases of Work (including O & M) have been fully performed, Settling Defendants shall schedule and conduct a pre-certification inspection to be attended by Settling Defendants and U.S. EPA. If, after the pre-certification inspection, Settling Defendants still believe that the Work has been fully performed, Settling Defendants shall submit a written report by a registered professional engineer stating that the Work has been completed in full satisfaction of the requirements of this Consent Decree. The report shall contain the following statement, signed by a responsible corporate official of a Settling Defendant or the Settling Defendants' Project Coordinator:

To the best of my knowledge, after thorough investigation, I certify that the information contained in or accompanying this submission is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If, after review of the written report, U.S. EPA, after reasonable opportunity to review and comment by the State, determines that any portion of the Work has not been completed in accordance with this Consent Decree, U.S. EPA will notify Settling Defendants in writing of the activities that must be undertaken by Settling Defendants pursuant to this Consent Decree to complete the Work, provided, however, that U.S. EPA may only require Settling Defendants to perform such activities pursuant to this Paragraph to the extent that such activities are consistent with the “scope of the remedy selected in the ROD,” as that term is defined in Paragraph 14.b. U.S. EPA will set forth in the notice a schedule for performance of such activities consistent with the Consent Decree and the SOW or require Settling Defendants to submit a schedule to U.S. EPA for approval pursuant to Section XI (U.S. EPA Approval of Plans and Other Submissions). Settling Defendants shall perform all activities described in the notice in accordance with the specifications and schedules established therein, subject to their right to invoke the dispute resolution procedures set forth in Section XIX (Dispute Resolution).

b. If U.S. EPA concludes, based on the initial or any subsequent request for Certification of Completion by Settling Defendants and after a reasonable opportunity for review

and comment by the State, that the Work has been performed in accordance with this Consent Decree, U.S. EPA will so notify Settling Defendants in writing.

XV. EMERGENCY RESPONSE

55. In the event of any action or occurrence during the performance of the Work which causes or threatens a release of Waste Material from the Site that constitutes an emergency situation or may present an immediate threat to public health or welfare or the environment, Settling Defendants shall, subject to Paragraph 56, immediately take all appropriate action to prevent, abate, or minimize such release or threat of release, and shall immediately notify the U.S. EPA's Project Coordinator, or, if the Project Coordinator is unavailable, U.S. EPA's Alternate Project Coordinator. If neither of these persons is available, Settling Defendants shall notify the U.S. EPA Emergency Response Unit, Region 5. Settling Defendants shall take such actions in consultation with U.S. EPA's Project Coordinator or other available authorized U.S. EPA officer and in accordance with all applicable provisions of the Health and Safety Plans, and any other applicable plans or documents developed pursuant to the SOW. In the event that Settling Defendants fail to take appropriate response action as required by this Section, and U.S. EPA takes such action instead, Settling Defendants shall reimburse U.S. EPA for all costs of the response action not inconsistent with the NCP pursuant to Section XVI (Payments for Response Costs).

56. Nothing in the preceding Paragraph or in this Consent Decree shall be deemed to limit any authority of the United States or the State a) to take all appropriate action to protect human health and the environment or to prevent, abate, respond to, or minimize an actual or threatened release of Waste Material on, at, or from the Site, or b) to direct or order such action, or seek an order from the Court, to protect human health and the environment or to prevent, abate, respond to, or minimize an actual or threatened release of Waste Material on, at, or from the Site, subject to Section XXI (Covenants Not to Sue by Plaintiff).

XVI. PAYMENTS FOR RESPONSE COSTS

57. Payments for Future Response Costs.

a. Settling Defendants shall pay to U.S. EPA all Future Response Costs not inconsistent with the National Contingency Plan. On a periodic basis the United States will send Settling Defendants a bill requiring payment that includes an Itemized Cost Summary a Region 5 prepared summary which includes direct and indirect costs incurred by U.S. EPA, including costs of its contractors, and the name of a DOJ-prepared cost summary which reflects costs incurred by DOJ and its contractors, if any. Settling Defendants shall make all payments within 30 days of Settling Defendants' receipt of each bill requiring payment, except as otherwise provided in Paragraph 58 according to the following procedures.

(1) If the payment amount demanded in the bill is more than \$10,000, payment shall be made to U.S. EPA by Electronics Funds Transfer ("EFT") in accordance with current EFT procedures to be provided to Settling Defendants by U.S. EPA Region 5. Payment shall be accompanied by a statement identifying the name and address of the party(ies) making payment, the Site name, U.S. EPA Region 5, the Site/Spill ID Number 0574, and the Court docket number for this action.

(2) If the amount demanded in the bill is \$10,000 or less, Settling Defendants may in lieu of the procedures in subparagraph 57(a)(1) make all payments required by this Paragraph by a certified or cashier's check or checks made payable to

"U.S. EPA Hazardous Substance Superfund," referencing the name and address of the party making the payment, U.S. EPA Site/Spill ID Number 0574, and DOJ Case Number 90-11-3-09102. Settling Defendants shall send the check(s) to:

U.S. Environmental Protection Agency, Region 5
Superfund Program Accounting & Analysis Section
P.O. Box 70753
Chicago, Illinois 60673-0753

b. At the time of payment, Settling Defendants shall send notice that payment has been made to the United States, to U.S. EPA and to the Regional Financial Management Officer, in accordance with Section XXVI (Notices and Submissions).

c. The total amount to be paid by Settling Defendants pursuant to Subparagraph 57.a shall be deposited in the Ford Road Special Account within the EPA Hazardous Substance Superfund to be retained and used to conduct ~~or~~ finance response actions at or in connection with the Site, or to be transferred by EPA to the EPA-Hazardous Substance Superfund.

58. Settling Defendants may contest payment of any Future Response Costs under Paragraph 57 if they determine that the United States has made an accounting error or if they allege that a cost item that is included represents costs that are inconsistent with the NCP. Such objection shall be made in writing within 30 days of receipt of the bill and must be sent to the United States pursuant to Section XXVI (Notices and Submissions). Any such objection shall specifically identify the contested Future Response Costs and the basis for objection. In the event of an objection, Settling Defendants shall within the 30-day period pay all uncontested Future Response Costs to the United States in the manner described in Paragraph 57. Simultaneously, Settling Defendants shall establish an interest-bearing escrow account in a federally-insured bank duly chartered in the State of Ohio and remit to that escrow account funds equivalent to the amount of the contested Future Response Costs. Settling Defendants shall send to the United States, as provided in Section XXVI (Notices and Submissions), a copy of the transmittal letter and check paying the uncontested Future Response Costs, and a copy of the correspondence that establishes and funds the escrow account, including, but not limited to, information containing the identity of the bank and bank account under which the escrow account is established as well as a bank statement showing the initial balance of the escrow account. Simultaneously with establishment of the escrow account, Settling Defendants shall initiate the Dispute Resolution procedures in Section XIX (Dispute Resolution). If the United States prevails in the dispute, within 5 days of the resolution of the dispute, Settling Defendants shall pay the sums due to the United States in the manner described in Paragraph 57. If Settling Defendants prevail concerning any aspect of the contested costs, Settling Defendants shall pay that portion of the costs (plus associated accrued interest) for which they did not prevail to the United States in the manner described in Paragraph 57; Settling Defendants shall be disbursed any balance of the escrow account. The dispute resolution procedures set forth in this Paragraph in conjunction with the procedures set forth in Section XIX (Dispute Resolution) shall be the exclusive mechanisms for resolving disputes regarding Settling Defendants' obligation to reimburse the United States for its Future Response Costs.

59. In the event that the payments required by Paragraph 57 are not made within 30 days of Settling Defendants' receipt of the bill, Settling Defendants shall pay Interest on the unpaid balance. The Interest on Future Response Costs shall begin to accrue on the date of the

bill. The Interest shall accrue through the date of Settling Defendants' payment. Payments of Interest made under this Paragraph shall be in addition to such other remedies or sanctions available to Plaintiff by virtue of Settling Defendants' failure to make timely payments under this Section, including, but not limited to, payment of stipulated penalties pursuant to Paragraph 74. Settling Defendants shall make all payments required by this Paragraph in the manner described in Paragraph 57.

XVII. INDEMNIFICATION AND INSURANCE

60. Settling Defendants' Indemnification of the United States.

a. The United States does not assume any liability by entering into this agreement or by virtue of any designation of Settling Defendants as U.S. EPA's authorized representatives under Section 104(e) of CERCLA. Settling Defendants shall indemnify, save and hold harmless the United States, and its officials, agents, employees, contractors, subcontractors, or representatives for or from any and all claims or causes of action arising from, or on account of, negligent or other wrongful acts or omissions of Settling Defendants, their officers, directors, employees, agents, contractors, subcontractors, and any persons acting on their behalf or under their control, in carrying out activities pursuant to this Consent Decree, including, but not limited to, any claims arising from any designation of Settling Defendants as U.S. EPA's authorized representatives under Section 104(e) of CERCLA. Nothing herein shall require the Lorain County Metropolitan Park District to expend funds in violation of Ohio Revised Code 5705.41(D)(1) or Ohio Const. art. VIII, Section 6. Further, Settling Defendants agree to pay the United States all costs it incurs including, but not limited to, attorneys fees and other expenses of litigation and settlement arising from, or on account of, claims made against the United States based on negligent or other wrongful acts or omissions of Settling Defendants, their officers, directors, employees, agents, contractors, subcontractors, and any persons acting on their behalf or under their control, in carrying out activities pursuant to this Consent Decree. The United States shall not be held out as a party to any contract entered into by or on behalf of Settling Defendants in carrying out activities pursuant to this Consent Decree. Neither Settling Defendants nor any such contractor shall be considered an agent of the United States.

b. The United States shall give Settling Defendants notice of any claim for which the United States plans to seek indemnification pursuant to Paragraph 60, and shall consult with Settling Defendants prior to settling such claim.

61. Settling Defendants waive all claims against the United States for damages or reimbursement or for set-off of any payments made or to be made to the United States, arising from or on account of any contract, agreement, or arrangement between any one or more of Settling Defendants and any person for performance of Work on or relating to the Site, including, but not limited to, claims on account of construction delays. In addition, Settling Defendants shall indemnify and hold harmless the United States with respect to any and all claims for damages or reimbursement arising from or on account of any contract, agreement, or arrangement between any one or more of Settling Defendants and any person for performance of Work on or relating to the Site, including, but not limited to, claims on account of construction delays.

62. No later than 15 days before commencing any on-site Work, Settling Defendants shall secure, and shall maintain until the first anniversary of U.S. EPA's Certification of Completion of the Remedial Action pursuant to Subparagraph 53.b of Section XIV (Certification of Completion) comprehensive general liability insurance with limits of two million dollars,

combined single limit, and automobile liability insurance with limits of two million dollars, combined single limit, naming the United States as an additional insured. In addition, for the duration of this Consent Decree, all Settling Defendants shall satisfy, or shall ensure that their contractors or subcontractors satisfy, all applicable laws and regulations regarding the provision of worker's compensation insurance for all persons performing the Work on behalf of Settling Defendants in furtherance of this Consent Decree. Within 30 days of the Effective Date of this Consent Decree, Settling Defendants shall provide to U.S. EPA certificates of such insurance and a copy of each insurance policy, if so requested by U.S. EPA. Settling Defendants shall resubmit such certificates and copies of policies each year on the anniversary of the Effective Date. If Settling Defendants demonstrate by evidence satisfactory to U.S. EPA that any contractor or subcontractor maintains insurance equivalent to that described above, or insurance covering the same risks but in a lesser amount, then, with respect to that contractor or subcontractor, Settling Defendants need provide only that portion of the insurance described above which is not maintained by the contractor or subcontractor.

XVIII. FORCE MAJEURE

63. "Force majeure," for purposes of this Consent Decree, is defined as any event arising from causes beyond the control of Settling Defendants, of any entity controlled by Settling Defendants, or of the Settling Defendants' contractors, that delays or prevents the performance of any obligation under this Consent Decree despite Settling Defendants' best efforts to fulfill the obligation. The requirement that Settling Defendants exercise "best efforts to fulfill the obligation" includes using best efforts to anticipate any potential force majeure event and best efforts to address the effects of any potential force majeure event (1) as it is occurring and (2) following the potential force majeure event, such that the delay is minimized to the greatest extent possible. "Force Majeure" does not include financial inability to complete the Work or a failure to attain the Performance Standards.

64. If any event occurs or has occurred that may delay the performance of any obligation under this Consent Decree, whether or not caused by a force majeure event, Settling Defendants shall notify orally U.S. EPA's Project Coordinator or, in his or her absence, U.S. EPA's Alternate Project Coordinator or, in the event both of U.S. EPA's designated representatives are unavailable, the Director of the Superfund Division, U.S. EPA Region 5, within 48 hours of when Settling Defendants first knew that the event might cause a delay. Within 5 days thereafter, Settling Defendants shall provide in writing to U.S. EPA an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; Settling Defendants' rationale for attributing such delay to a force majeure event if they intend to assert such a claim; and a statement as to whether, in the opinion of Settling Defendants, such event may cause or contribute to an endangerment to public health, welfare or the environment. Settling Defendants shall include with any notice all available documentation supporting their claim that the delay was attributable to a force majeure. Failure to comply with the above requirements shall preclude Settling Defendants from asserting any claim of force majeure for that event for the period of time of such failure to comply, and for any additional delay caused by such failure. Settling Defendants shall be deemed to know of any circumstance of which Settling Defendants or any entity controlled by Settling Defendants, or Settling Defendants' contractors knew or should have known.

65. If U.S. EPA agrees that the delay or anticipated delay is attributable to a force majeure event, the time for performance of the obligations under this Consent Decree that are affected by the force majeure event will be extended by U.S. EPA for such time as is necessary to complete those obligations. An extension of the time for performance of the obligations affected by the force majeure event shall not, of itself, extend the time for performance of any other obligation. If U.S. EPA does not agree that the delay or anticipated delay has been or will be caused by a force majeure event, U.S. EPA will notify Settling Defendants in writing of its decision. If U.S. EPA agrees that the delay is attributable to a force majeure event, U.S. EPA will notify Settling Defendants in writing of the length of the extension, if any, for performance of the obligations affected by the force majeure event.

66. If Settling Defendants elect to invoke the dispute resolution procedures set forth in Section XIX (Dispute Resolution), they shall do so no later than 15 days after receipt of U.S. EPA's notice. In any such proceeding, Settling Defendants shall have the burden of demonstrating by a preponderance of the evidence that the delay or anticipated delay has been or will be caused by a force majeure event, that the duration of the delay or the extension sought was or will be warranted under the circumstances, that best efforts were exercised to avoid and mitigate the effects of the delay, and that Settling Defendants complied with the requirements of Paragraphs 63 and 64, above. If Settling Defendants carry this burden, the delay at issue shall be deemed not to be a violation by Settling Defendants of the affected obligation of this Consent Decree identified to U.S. EPA and the Court.

XIX. DISPUTE RESOLUTION

67. Unless otherwise expressly provided for in this Consent Decree, the dispute resolution procedures of this Section shall be the exclusive mechanism to resolve disputes arising under or with respect to this Consent Decree. However, the procedures set forth in this Section shall not apply to actions by the United States to enforce obligations of Settling Defendants that have not been disputed in accordance with this Section.

68. Any dispute which arises under or with respect to this Consent Decree shall in the first instance be the subject of informal negotiations between the parties to the dispute. The period for informal negotiations shall not exceed 20 days from the time the dispute arises, unless it is modified by written agreement of the parties to the dispute. The dispute shall be considered to have arisen when one party sends the other parties a written Notice of Dispute.

69. Statements of Position.

a. In the event that the parties cannot resolve a dispute by informal negotiations under the preceding Paragraph, then the position advanced by U.S. EPA shall be considered binding unless, within 30 days after the conclusion of the informal negotiation period, Settling Defendants invoke the formal dispute resolution procedures of this Section by serving on the United States a written Statement of Position on the matter in dispute, including, but not limited to, any factual data, analysis or opinion supporting that position and any supporting documentation relied upon by Settling Defendants. The Statement of Position shall specify Settling Defendants' position as to whether formal dispute resolution should proceed under Paragraph 70 or Paragraph 71.

b. Within 30 days after receipt of Settling Defendants' Statement of Position, U.S. EPA will serve on Settling Defendants its Statement of Position, including, but not limited to, any factual data, analysis, or opinion supporting that position and all supporting documentation relied upon by U.S. EPA. U.S. EPA's Statement of Position shall include a

statement as to whether formal dispute resolution should proceed under Paragraph 70 or 71. Within 20 days after receipt of U.S. EPA's Statement of Position, Settling Defendants may submit a Reply.

c. If there is disagreement between U.S. EPA and Settling Defendants as to whether dispute resolution should proceed under Paragraph 70 or 71, the parties to the dispute shall follow the procedures set forth in the paragraph determined by U.S. EPA to be applicable. However, if Settling Defendants ultimately appeal to the Court to resolve the dispute, the Court shall determine which paragraph is applicable in accordance with the standards of applicability set forth in Paragraphs 70 and 71.

70. Formal dispute resolution for disputes pertaining to the selection or adequacy of any response action and all other disputes that are accorded review on the administrative record under applicable principles of administrative law shall be conducted pursuant to the procedures set forth in this Paragraph. For purposes of this Paragraph, the adequacy of any response action includes, without limitation: (1) the adequacy or appropriateness of plans; procedures to implement plans, or any other items requiring approval by U.S. EPA under this Consent Decree; and (2) the adequacy of the performance of response actions taken pursuant to this Consent Decree. Nothing in this Consent Decree shall be construed to allow any dispute by Settling Defendants regarding the validity of the ROD's provisions.

a. An administrative record of the dispute shall be maintained by U.S. EPA and shall contain all statements of position, including supporting documentation, submitted pursuant to this Section. Where appropriate, U.S. EPA may allow submission of supplemental statements of position by the parties to the dispute.

b. The Director of the Superfund Division, U.S. EPA Region 5, will issue a final administrative decision resolving the dispute based on the administrative record described in Paragraph 70.a. This decision shall be binding upon Settling Defendants, subject only to the right to seek judicial review pursuant to Paragraph 70.c and d.

c. Any administrative decision made by U.S. EPA pursuant to Paragraph 70.b. shall be reviewable by this Court, provided that a motion for judicial review of the decision is filed by Settling Defendants with the Court and served on all Parties within 10 days of receipt of U.S. EPA's decision. The motion shall include a description of the matter in dispute, the efforts made by the parties to resolve it, the relief requested, and the schedule, if any, within which the dispute must be resolved to ensure orderly implementation of this Consent Decree. The United States may file a response to Settling Defendants' motion.

d. In proceedings on any dispute governed by this Paragraph, Settling Defendants shall have the burden of demonstrating that the decision of the Superfund Division Director is arbitrary and capricious or otherwise not in accordance with law. Judicial review of U.S. EPA's decision shall be on the administrative record compiled pursuant to Paragraph 70.a.

71. Formal dispute resolution for disputes that neither pertain to the selection or adequacy of any response action nor are otherwise accorded review on the administrative record under applicable principles of administrative law, shall be governed by this Paragraph.

a. Following receipt of Settling Defendants' Statement of Position submitted pursuant to Paragraph 69, the Director of the Superfund Division, U.S. EPA Region 5, will issue a final decision resolving the dispute. The Superfund Division Director's decision shall be binding on Settling Defendants unless, within 10 days of receipt of the decision, Settling

Defendants file with the Court and serve on the parties a motion for judicial review of the decision setting forth the matter in dispute, the efforts made by the parties to resolve it, the relief requested, and the schedule, if any, within which the dispute must be resolved to ensure orderly implementation of the Consent Decree. The United States may file a response to Settling Defendants' motion.

b. Notwithstanding Paragraph K of Section I (Background) of this Consent Decree, judicial review of any dispute governed by this Paragraph shall be governed by applicable principles of law.

72. The invocation of formal dispute resolution procedures under this Section shall not extend, postpone or affect in any way any obligation of Settling Defendants under this Consent Decree, not directly in dispute, unless U.S. EPA or the Court agrees otherwise. Stipulated penalties with respect to the disputed matter shall continue to accrue but payment shall be stayed pending resolution of the dispute as provided in Paragraph 80. Notwithstanding the stay of payment, stipulated penalties shall accrue from the first day of noncompliance with any applicable provision of this Consent Decree. In the event that Settling Defendants do not prevail on the disputed issue, stipulated penalties shall be assessed and paid as provided in Section XX (Stipulated Penalties).

XX. STIPULATED PENALTIES

73. Settling Defendants shall be liable for stipulated penalties in the amounts set forth in Paragraphs 74 and 75 to the United States for failure to comply with the requirements of this Consent Decree specified below, unless excused under Section XVIII (Force Majeure). "Compliance" by Settling Defendants shall include completion of the activities under this Consent Decree or any work plan or other plan approved under this Consent Decree identified below in accordance with all applicable requirements of law, this Consent Decree, the SOW, and any plans or other documents approved by U.S. EPA pursuant to this Consent Decree and within the specified time schedules established by and approved under this Consent Decree.

74. Stipulated Penalty Amounts - Work.

a. The following stipulated penalties shall accrue per violation per day for any noncompliance identified in Subparagraph 74.b:

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$ 1,000	1st through 14th day
\$ 2,000	15th through 30th day
\$4,000	31st day and beyond

b. Compliance Milestones.

(1) Submittal and if necessary, modification of any and all draft and final Remedial Design Work Plans as outlined in Paragraph 11.

(2) Submittal of Preliminary, Intermediate, Prefinal and Final Design as outlined in Paragraph 11.

(3) Submittal and if necessary, modification of any and all draft and final Remedial Action Work Plans as outlined in Paragraph 12.

(4) Implementation of the approved Remedial Action Work Plan.

(5) Submittal and if necessary, modifications of Remedial Action Reports as required by Section III, Task 4, part E of the SOW.

(6) Completion of the Remedial Action.

(7) Submittal and if necessary, modification of the Performance Standard Verification and Final Operation and Maintenance Plan as required by Section III, Tasks 5 and 6 of the SOW.

(8) Perfection of all required Institutional Controls as outlined in Section IX of this Consent Decree..

(9) Establishment of financial assurance as required by Paragraphs 47 and 48.

(10) Procurement of proof of insurance.

(11) Payment of all monies required to be paid pursuant to Section XVI.

(12) Submittal and, if necessary, modification of any Work Plan(s) for further response actions and additional Work pursuant to Sections VI, VIII, IX or X.

75. Stipulated Penalty Amounts - Reports.

The following stipulated penalties shall accrue per violation per day for failure to submit timely or adequate reports or other written documents pursuant to Section X (Reporting Requirements):

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$ 400	1st through 14th day
\$ 1,000	15th through 30th day
\$ 2,000	31st day and beyond

76. All penalties shall begin to accrue on the day after the complete performance is due or the day a violation occurs, and shall continue to accrue through the final day of the correction of the noncompliance or completion of the activity. However, stipulated penalties shall not accrue: (1) with respect to a deficient submission under Section XI (U.S. EPA Approval of Plans and Other Submissions), during the period, if any, beginning on the 31st day after U.S. EPA's receipt of such submission until the date that U.S. EPA notifies Settling Defendants of any deficiency; (2) with respect to a decision by the Director of the Superfund Division, U.S. EPA Region 5, under Paragraph 70.b or 71.a of Section XIX (Dispute Resolution), during the period, if any, beginning on the 21st day after the date that Settling Defendants' reply to U.S. EPA's Statement of Position is received until the date that the Director issues a final decision regarding such dispute; or (3) with respect to judicial review by this Court of any dispute under Section XIX (Dispute Resolution), during the period, if any, beginning on the 31st day after the Court's receipt of the final submission regarding the dispute until the date that the Court issues a final decision regarding such dispute. Nothing herein shall prevent the simultaneous accrual of separate penalties for separate violations of this Consent Decree.

77. Following U.S. EPA's determination that Settling Defendants have failed to comply with a requirement of this Consent Decree, U.S. EPA may give Settling Defendants

written notification of the same and describe the noncompliance. U.S. EPA may send Settling Defendants a written demand for the payment of the penalties.

78. All penalties accruing under this Section shall be due and payable to the United States within 30 days of Settling Defendants' receipt from U.S. EPA of a demand for payment of the penalties, unless Settling Defendants invoke the Dispute Resolution procedures under Section XIX (Dispute Resolution). All payments to the United States under this Section shall be paid by certified or cashier's check(s) made payable to the Ford Road Special Account within the U.S. EPA Hazardous Substance Superfund to be retained and used to conduct or finance response actions at or in connection with the Site, or to be transferred by U.S. EPA to the U.S. EPA Hazardous Substance Superfund "U.S. EPA Hazardous Substances Superfund," shall be mailed to:

U.S. Environmental Protection Agency, Region 5
P.O. Box 371531
Pittsburgh PA 15251-7531

With a copy to U.S. EPA Project Manager:

Demaree Collier
U.S. EPA Project Manager/Coordinator
U.S. EPA, Region 5
77 W. Jackson Blvd, SR-6J
Chicago, Illinois 60604

and shall indicate that the payment is for stipulated penalties, and shall reference U.S. EPA Region 5 and Site/Spill ID # 0574, the DOJ Case Number 90-11-3-09102, and the name and address of the party making payment. Copies of check(s) paid pursuant to this Section, and any accompanying transmittal letter(s), shall be sent to the United States as provided in Section XXVI (Notices and Submissions).

79. The payment of penalties shall not alter in any way Settling Defendants' obligation to complete the performance of the Work required under this Consent Decree.

80. Penalties shall continue to accrue as provided in Paragraph 76 during any dispute resolution period, but need not be paid until the following:

a. If the dispute is resolved by agreement or by a decision of U.S. EPA that is not appealed to this Court, accrued penalties determined to be owing shall be paid to U.S. EPA within 30 days of the agreement or the receipt of U.S. EPA's decision or order; and

b. If the dispute is appealed to this Court and the United States prevails in whole or in part, Settling Defendants shall pay all accrued penalties determined by the Court to be owed to U.S. EPA within 60 days of receipt of the Court's decision or order.

c. If the District Court's decision is appealed by any Party, Settling Defendants shall pay all accrued penalties determined by the District Court to be owing to the United States into an interest bearing escrow account within 60 days of receipt of the Court's decision or order. Penalties shall be paid into this account as they continue to accrue, at least every 60 days. Within 15 days of receipt of the final appellate court decision, the escrow agent shall pay the balance of the account to U.S. EPA or to Settling Defendants to the extent that they prevail.

81. If Settling Defendants fail to pay stipulated penalties when due, the United States may institute proceedings to collect the penalties, as well as interest. Settling Defendants shall pay Interest on the unpaid balance, which shall begin to accrue on the date of demand made pursuant to Paragraph 78.

82. Nothing in this Consent Decree shall be construed as prohibiting, altering, or in any way limiting the ability of the United States to seek any other remedies or sanctions available by virtue of Settling Defendants' violation of this Decree or of the statutes and regulations upon which it is based, including, but not limited to, penalties pursuant to Section 122(l) of CERCLA, provided, however, that the United States shall not seek civil penalties pursuant to Section 122(l) of CERCLA for any violation for which a stipulated penalty is provided herein, except in the case of a willful violation of the Consent Decree.

83. Notwithstanding any other provision of this Section, the United States may, in its unreviewable discretion, waive any portion of stipulated penalties or Interest that have accrued pursuant to this Consent Decree.

XXI. COVENANTS NOT TO SUE BY PLAINTIFF

84. In consideration of the actions that will be performed and the payments that will be made by Settling Defendants under the terms of the Consent Decree, and except as specifically provided in Paragraphs 85, 86, and 88 of this Section, the United States covenants not to sue or to take administrative action against Settling Defendants pursuant to Sections 106 and 107(a) of CERCLA relating to the Site. With respect to future liability, these covenants not to sue shall take effect upon Certification of Completion of the Remedial Action by U.S. EPA pursuant to Paragraph 53.a of Section XIV. These covenants not to sue are conditioned upon the satisfactory performance by Settling Defendants of their obligations under this Consent Decree. These covenants not to sue extend only to Settling Defendants and do not extend to any other person.

85. United States' Pre-certification Reservations. Notwithstanding any other provision of this Consent Decree, the United States reserves, and this Consent Decree is without prejudice to, the right to institute proceedings in this action or in a new action, or to issue an administrative order seeking to compel Settling Defendants

a. to perform further response actions relating to the Site, or
b. to reimburse the United States for additional costs of response if, prior to Certification of Completion of the Remedial Action:

- (1) conditions at the Site, previously unknown to U.S. EPA, are discovered, or
- (2) information, previously unknown to U.S. EPA, is received, in whole or in part, and U.S. EPA determines that these previously unknown conditions or information together with any other relevant information indicates that the Remedial Action is not protective of human health or the environment.

86. United States' Post-certification Reservations. Notwithstanding any other provision of this Consent Decree, the United States reserves, and this Consent Decree is without prejudice to, the right to institute proceedings in this action or in a new action, or to issue an administrative order seeking to compel Settling Defendants

a. to perform further response actions relating to the Site, or

b. to reimburse the United States for additional costs of response if, subsequent to Certification of Completion of the Remedial Action:

(1) conditions at the Site, previously unknown to U.S. EPA, are discovered, or

(2) information, previously unknown to U.S. EPA, is received, in whole or in part, and U.S. EPA determines that these previously unknown conditions or this information together with other relevant information indicate that the Remedial Action is not protective of human health or the environment.

87. For purposes of Paragraph 85, the information and the conditions known to U.S. EPA shall include only that information and those conditions known to U.S. EPA as of the date the ROD was signed and set forth in the Record of Decision for the Site and the administrative record supporting the Record of Decision. For purposes of Paragraph 86, the information and the conditions known to U.S. EPA shall include only that information and those conditions known to U.S. EPA as of the date of Certification of Completion of the Remedial Action and set forth in the Record of Decision, the administrative record supporting the Record of Decision, the post-ROD administrative record, or in any information received by U.S. EPA pursuant to the requirements of this Consent Decree prior to Certification of Completion of the Remedial Action.

88. General reservations of rights. The United States reserves, and this Consent Decree is without prejudice to, all rights against Settling Defendants with respect to all matters not expressly included within Plaintiff's covenant not to sue. Notwithstanding any other provision of this Consent Decree, the United States reserves all rights against Settling Defendants with respect to:

a. claims based on a failure by Settling Defendants to meet a requirement of this Consent Decree;

b. liability arising from the past, present, or future disposal, release, or threat of release of Waste Material outside of the Site;

c. liability based upon Settling Defendants' ownership or operation of the Site, or upon Settling Defendants' transportation, treatment, storage, or disposal, or the arrangement for the transportation, treatment, storage, or disposal of Waste Material at or in connection with the Site, other than as provided in the ROD, the Work, or otherwise ordered by U.S. EPA, after signature of this Consent Decree by Settling Defendants;

d. liability for damages for injury to, destruction of, or loss of natural resources, and for the costs of any natural resource damage assessments;

e. criminal liability;

f. liability for violations of federal or state law which occur during or after implementation of the Remedial Action; and

g. liability, prior to Certification of Completion of the Remedial Action, for additional response actions that U.S. EPA determines are necessary to achieve Performance Standards, but that cannot be required pursuant to Paragraph 14 (Modification of the SOW or Related Work Plans).

89. Work Takeover

a. In the event U.S. EPA determines that Settling Defendants have (i) ceased implementation of any portion of the Work, or (ii) are seriously or repeatedly deficient or late in their performance of the Work, or (iii) are implementing the Work in a manner which may cause an endangerment to human health or the environment, U.S. EPA may issue a written notice ("Work Takeover Notice") to Settling Defendants. Any Work Takeover Notice issued by U.S. EPA will specify the grounds upon which such notice was issued and will provide Settling Defendants a period of 15 days within which to remedy the circumstances giving rise to U.S. EPA's issuance of such notice.

b. If, after expiration of the 15-day notice period specified in Paragraph 89(a), Settling Defendants have not remedied to U.S. EPA's satisfaction the circumstances giving rise to U.S. EPA's issuance of the relevant Work Takeover Notice, U.S. EPA may at any time thereafter assume the performance of all or any portions of the Work as U.S. EPA deems necessary ("Work Takeover"). U.S. EPA shall notify Settling Defendants in writing (which writing may be electronic) if U.S. EPA determines that implementation of a Work Takeover is warranted under this Paragraph 89(b).

c. Settling Defendants may invoke the procedures set forth in Section XIX (Dispute Resolution), Paragraph 70, to dispute U.S. EPA's implementation of a Work Takeover under Paragraph 89(b). However, notwithstanding Settling Defendants' invocation of such dispute resolution procedures, and during the pendency of any such dispute, U.S. EPA may in its sole discretion commence and continue a Work Takeover under Paragraph 89(b) until the earlier of (i) the date that Settling Defendants remedy, to U.S. EPA's satisfaction, the circumstances giving rise to U.S. EPA's issuance of the relevant Work Takeover Notice or (ii) the date that a final decision is rendered in accordance with Section XIX (Dispute Resolution), Paragraph 70, requiring U.S. EPA to terminate such Work Takeover.

d. After commencement and for the duration of any Work Takeover, U.S. EPA shall have immediate access to and benefit of any performance guarantee(s) provided pursuant to Section XIII of this Consent Decree, in accordance with the provisions of Paragraph 51 of that Section. If and to the extent that U.S. EPA is unable to secure the resources guaranteed under any such performance guarantee(s) and Settling Defendants fail to remit a cash amount up to but not exceeding the estimated cost of the remaining Work to be performed, all in accordance with the provisions of Paragraph 51, any unreimbursed costs incurred by U.S. EPA in performing Work under the Work Takeover shall be considered Future Response Costs that Settling Defendants shall pay pursuant to Section XVI (Payment for Response Costs).

90. Notwithstanding any other provision of this Consent Decree, the United States retains all authority and reserves all rights to take any and all response actions authorized by law.

XXII. COVENANTS BY SETTLING DEFENDANTS

91. Covenant Not to Sue. Subject to the reservations in Paragraph 92, Settling Defendants hereby covenant not to sue and agree not to assert any claims or causes of action against the United States with respect to the Site and Future Response Costs as defined herein or this Consent Decree, including, but not limited to:

a. any direct or indirect claim for reimbursement from the Hazardous Substance Superfund (established pursuant to the Internal Revenue Code, 26 U.S.C. § 9507) through CERCLA Sections 106(b)(2), 107, 111, 112, 113 or any other provision of law;

b. any claims against the United States, including any department, agency or instrumentality of the United States under CERCLA Sections 107 or 113 related to the Site, or

c. any claims arising out of response actions at or in connection with the Site, including any claim under the United States Constitution, the Ohio State Constitution, the Tucker Act, 28 U.S.C. § 1491, the Equal Access to Justice Act, 28 U.S.C. § 2412, as amended, or at common law.

Except as provided in Paragraph 94 (Waiver of Claims Against *De Micromis* Parties) and Paragraph 100 (Waiver of Claim-Splitting Defenses), these covenants not to sue shall not apply in the event that the United States brings a cause of action or issues an order pursuant to the reservations set forth in Paragraphs 85, 86, 88 (b) - (d) or 88 (g), but only to the extent that Settling Defendants' claims arise from the same response action, response costs, or damages that the United States is seeking pursuant to the applicable reservation.

92. Settling Defendants reserve, and this Consent Decree is without prejudice to, claims against the United States, subject to the provisions of Chapter 171 of Title 28 of the United States Code, for money damages for injury or loss of property or personal injury or death caused by the negligent or wrongful act or omission of any employee of the United States while acting within the scope of his office or employment under circumstances where the United States, if a private person, would be liable to the claimant in accordance with the law of the place where the act or omission occurred. However, any such claim shall not include a claim for any damages caused, in whole or in part, by the act or omission of any person, including any contractor, who is not a federal employee as that term is defined in 28 U.S.C. § 2671; nor shall any such claim include a claim based on U.S. EPA's selection of response actions, or the oversight or approval of Settling Defendants' plans or activities. The foregoing applies only to claims which are brought pursuant to any statute other than CERCLA and for which the waiver of sovereign immunity is found in a statute other than CERCLA.

93. Nothing in this Consent Decree shall be deemed to constitute preauthorization of a claim within the meaning of Section 111 of CERCLA, 42 U.S.C. § 9611, or 40 C.F.R. § 300.700(d).

94. Settling Defendants agree not to assert any claims and to waive all claims or causes of action that they may have for all matters relating to the Site, including for contribution, against any person where the person's liability to Settling Defendants with respect to the Site is based solely on having arranged for disposal or treatment, or for transport for disposal or treatment, of hazardous substances at the Site, or having accepted for transport for disposal or treatment of hazardous substances at the Site, if:

a. The materials contributed by such person to the Site containing hazardous substances did not exceed the greater of (i) 0.002% of the total volume of waste at the Site, or (ii) 110 gallons of liquid materials or 200 pounds of solid materials.

b. This waiver shall not apply to any claim or cause of action against any person meeting the above criteria if U.S. EPA has determined that the materials contributed to the Site by such person contributed or could contribute significantly to the costs of response at the Site. This waiver also shall not apply with respect to any defense, claim, or cause of action that a Settling Defendant may have against any person if such person asserts a claim or cause of action relating to the Site against such Settling Defendant.

95. Settling Defendants agree not to seek judicial review of the final rule listing the Site on the NPL based on a claim that changed site conditions that resulted from the performance of the Work in any way affected the basis for listing the Site.

XXIII. EFFECT OF SETTLEMENT; CONTRIBUTION PROTECTION

96. Except as provided in Paragraph 94 (Waiver of Claims Against *De Micromis* Parties), nothing in this Consent Decree shall be construed to create any rights in, or grant any cause of action to, any person not a Party to this Consent Decree. The preceding sentence shall not be construed to waive or nullify any rights that any person not a signatory to this decree may have under applicable law. Except as provided in Paragraph 94 (Waiver of Claims Against *De Micromis* Parties), each of the Parties expressly reserves any and all rights (including, but not limited to, any right to contribution), defenses, claims, demands, and causes of action which each Party may have with respect to any matter, transaction, or occurrence relating in any way to the Site against any person not a Party hereto. Subject to the terms of private written agreements, Settling Defendants do hereby waive any further claims they may have against other Settling Defendants for contribution or cost recovery.

97. The Parties agree, and by entering this Consent Decree this Court finds, that Settling Defendants are entitled, as of the Effective Date, to protection from contribution actions or claims as provided by CERCLA Section 113(f)(2), 42 U.S.C. § 9613(f)(2) for matters addressed in this Consent Decree. For purposes of the preceding sentence, the "matters addressed" in this Consent Decree are all response actions taken or to be taken and all response costs incurred or to be incurred by the United States or any other person with respect to the Site. Matters addressed in this Consent Decree do not include those response costs or response actions as to which the United States has reserved its rights under this Consent Decree (except for claims for failure to comply with this Decree), in the event that the United States asserts rights against Settling Defendants coming within the scope of such reservations.

98. Settling Defendants agree that with respect to any suit or claim for contribution brought by them for matters related to this Consent Decree they will notify the United States in writing no later than 60 days prior to the initiation of such suit or claim.

99. Settling Defendants also agree that with respect to any suit or claim for contribution brought against them for matters related to this Consent Decree they will notify in writing the United States within 10 days of service of the complaint on them. In addition, Settling Defendants shall notify the United States within 10 days of service or receipt of any Motion for Summary Judgment and within 10 days of receipt of any order from a court setting a case for trial.

100. In any subsequent administrative or judicial proceeding initiated by the United States for injunctive relief, recovery of response costs, or other appropriate relief relating to the Site, Settling Defendants shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, claim-splitting, or other defenses based upon any contention that the claims raised by the United States or the State in the subsequent proceeding were or should have been brought in the instant case; provided, however, that nothing in this Paragraph affects the enforceability of the covenants not to sue set forth in Section XXI (Covenants Not to Sue by Plaintiff).

XXIV. ACCESS TO INFORMATION

101. Settling Defendants shall provide to U.S. EPA, upon request, copies of all documents and information within their possession or control or that of their contractors or agents relating to activities at the Site or to the implementation of this Consent Decree, including, but not limited to, sampling, analysis, chain of custody records, manifests, trucking logs, receipts, reports, sample traffic routing, correspondence, or other documents or information related to the Work. Settling Defendants shall also make available to U.S. EPA, for purposes of investigation, information gathering, or testimony, their employees, agents, or representatives with knowledge of relevant facts concerning the performance of the Work.

102. Business Confidential and Privileged Documents.

a. Settling Defendants may assert business confidentiality claims covering part or all of the documents or information submitted to Plaintiff under this Consent Decree to the extent permitted by and in accordance with Section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7), and 40 C.F.R. § 2.203(b). Documents or information determined to be confidential by U.S. EPA will be afforded the protection specified in 40 C.F.R. Part 2, Subpart B. If no claim of confidentiality accompanies documents or information when they are submitted to U.S. EPA, or if U.S. EPA has notified Settling Defendants that the documents or information are not confidential under the standards of Section 104(e)(7) of CERCLA or 40 C.F.R. Part 2, Subpart B, the public may be given access to such documents or information without further notice to Settling Defendants.

b. Settling Defendants may assert that certain documents, records and other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If Settling Defendants assert such a privilege in lieu of providing documents, they shall provide the Plaintiff with the following: (1) the title of the document, record, or information; (2) the date of the document, record, or information; (3) the name and title of the author of the document, record, or information; (4) the name and title of each addressee and recipient; (5) a description of the contents of the document, record, or information; and (6) the privilege asserted by Settling Defendants. However, no documents, reports or other information created or generated pursuant to the requirements of the Consent Decree shall be withheld on the grounds that they are privileged.

103. No claim of confidentiality shall be made with respect to any data, including, but not limited to, all sampling, analytical, monitoring, hydrogeologic, scientific, chemical, or engineering data, or any other documents or information evidencing conditions at or around the Site, provided that Settling Defendants may assert work product or attorney-client privilege with respect to documents which contain such data or information so long as they have submitted or contemporaneously submit to U.S. EPA the data or other factual portions of such documents evidencing physical conditions at or around the Site.

XXV. RETENTION OF RECORDS

104. Until 10 years after Settling Defendants' receipt of U.S. EPA's notification pursuant to Paragraph 54.b of Section XIV (Certification of Completion of the Work), each Settling Defendant shall preserve and retain all non-identical copies of records and documents (including records or documents in electronic form) now in its possession or control or which come into its possession or control that relate in any manner to its liability under CERCLA with respect to the Site, provided, however, that Settling Defendants who are potentially liable as owners or operators of the Site must retain, in addition, all documents and records that relate to

the liability of any other person under CERCLA with respect to the Site. Each Settling Defendant must also retain, and instruct its contractors and agents to preserve, for the same period of time specified above all non-identical copies of the last draft or final version of any documents or records (including documents or records in electronic form) now in its possession or control or which come into its possession or control that relate in any manner to the performance of the Work, provided, however, that each Settling Defendant (and its contractors and agents) must retain, in addition, copies of all data generated during the performance of the Work and not contained in the aforementioned documents required to be retained. Each of the above record retention requirements shall apply regardless of any corporate retention policy to the contrary.

105. At the conclusion of this document retention period, Settling Defendants shall notify the United States at least 90 days prior to the destruction of any such records or documents, and, upon request by the United States, Settling Defendants shall deliver any such records or documents to U.S. EPA. Settling Defendants may assert that certain documents, records and other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If Settling Defendants assert such a privilege, they shall provide the Plaintiff with the following: (1) the title of the document, record, or information; (2) the date of the document, record, or information; (3) the name and title of the author of the document, record, or information; (4) the name and title of each addressee and recipient; (5) a description of the subject of the document, record, or information; and (6) the privilege asserted by Settling Defendants. However, no documents, reports or other information created or generated pursuant to the requirements of the Consent Decree shall be withheld on the grounds that they are privileged.

106. Each Settling Defendant hereby certifies individually that, to the best of its knowledge and belief, after thorough inquiry, it has not altered, mutilated, discarded, destroyed or otherwise disposed of any records, documents or other information (other than identical copies) relating to its potential liability regarding the Site since notification of potential liability by the United States or the State or the filing of suit against it regarding the Site and that it has fully complied with any and all U.S. EPA requests for information pursuant to Section 104(e) and 122(e) of CERCLA, 42 U.S.C. 9604(e) and 9622(e), and Section 3007 of RCRA, 42 U.S.C. 6927.

XXVI. NOTICES AND SUBMISSIONS

107. Whenever, under the terms of this Consent Decree, written notice is required to be given or a report or other document is required to be sent by one Party to another, it shall be directed to the individuals at the addresses specified below, unless those individuals or their successors give notice of a change to the other Parties in writing. All notices and submissions shall be considered effective upon receipt, unless otherwise provided. Written notice as specified herein shall constitute complete satisfaction of any written notice requirement of the Consent Decree with respect to the United States, U.S. EPA, and Settling Defendants, respectively.

As to the United States:

Chief, Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611
Washington, D.C. 20044-7611
Re: DJ # 90-11-3-09102

and

Director, Superfund Division
United States Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Chicago, Il 60604

As to U.S. EPA:

Demaree Collier
U.S. EPA Project Manager/Coordinator
United States Environmental Protection Agency
Region 5
77 West Jackson Boulevard, SR-6J
Chicago, Il 60604

Robert L. Thompson
Associate Regional Counsel
U.S. Environmental Protection Agency
Region 5
77 West Jackson Boulevard, C-14J
Chicago, Illinois 60604

As to the State of Ohio:

Vanessa Steigerwald Dick
Ohio EPA Northeast District Office
2110 East Aurora Road
Twinsburg, Ohio 44087

As to the Settling Defendants:

Patrick S. Steerman
Project Coordinator
Steerman Environmental Management &
Consulting, LLC
422 Creek View Lane
Roswell, Georgia 30075

Jonathan R. Haden
Coordinating Counsel
Lathrop & Gage, L.C.
2345 Grand, Suite 2700
Kansas City, Missouri 64108

XXVII. EFFECTIVE DATE

108. The effective date of this Consent Decree shall be the date upon which this Consent Decree is entered by the Court, except as otherwise provided herein.

XXVIII. RETENTION OF JURISDICTION

109. This Court retains jurisdiction over both the subject matter of this Consent Decree and Settling Defendants for the duration of the performance of the terms and provisions of this Consent Decree for the purpose of enabling any of the Parties to apply to the Court at any time for such further order, direction, and relief as may be necessary or appropriate for the construction or modification of this Consent Decree, or to effectuate or enforce compliance with its terms, or to resolve disputes in accordance with Section XIX (Dispute Resolution) hereof.

XXIX. APPENDICES

110. The following appendices are attached to and incorporated into this Consent Decree:

“Appendix A” is the ROD.

“Appendix B” is the SOW.

“Appendix C” is the description and/or map of the Site.

“Appendix D” is the complete list of Settling Defendants.

XXX. COMMUNITY RELATIONS

111. Settling Defendants shall propose to U.S. EPA their participation in the community relations plan to be developed by U.S. EPA. U.S. EPA will determine the appropriate role for Settling Defendants under the Plan. Settling Defendants shall also cooperate with U.S. EPA in providing information regarding the Work to the public. As requested by U.S. EPA, Settling Defendants shall participate in the preparation of such information for dissemination to the public and in public meetings which may be held or sponsored by U.S. EPA to explain activities at or relating to the Site.

Within 30 days of a request by U.S. EPA, Settling Defendants shall provide U.S. EPA with a Technical Assistance Plan (TAP) for providing and administering up to \$50,000 of

Settling Defendants' funds to be used by a qualified community group to hire independent technical advisors during the Work conducted pursuant to this Decree. The TAP shall state that Settling Defendants will provide and administer any additional amounts needed if U.S. EPA, in its discretion, determines that the selected community group has demonstrated such a need. Upon its approval by U.S. EPA, the TAP shall be incorporated into and become enforceable under this Consent Decree.

XXXI. MODIFICATION

112. Schedules specified in this Consent Decree for completion of the Work may be modified by agreement of U.S. EPA and Settling Defendants. All such modifications shall be made in writing.

113. Except as provided in Paragraph 14 (Modification of the SOW or Related Work Plans), no material modifications shall be made to the SOW without written notification to and written approval of the United States, Settling Defendants, and the Court, if such modifications fundamentally alter the basic features of the selected remedy within the meaning of 40 C.F.R. 300.435(c)(2)(B)(ii). Prior to providing its approval to any modification, the United States will provide the State with a reasonable opportunity to review and comment on the proposed modification. Modifications to the SOW that do not materially alter that document, or material modifications to the SOW that do not fundamentally alter the basic features of the selected remedy within the meaning of 40 C.F.R. 300.435(c)(2)(B)(ii), may be made by written agreement between U.S. EPA, after providing the State with a reasonable opportunity to review and comment on the proposed modification, and Settling Defendants.

114. Nothing in this Decree shall be deemed to alter the Court's power to enforce, supervise or approve modifications to this Consent Decree.

XXXII. LODGING AND OPPORTUNITY FOR PUBLIC COMMENT

115. This Consent Decree shall be lodged with the Court for a period of not less than thirty (30) days for public notice and comment in accordance with Section 122(d)(2) of CERCLA, 42 U.S.C. § 9622(d)(2), and 28 C.F.R. § 50.7. The United States reserves the right to withdraw or withhold its consent if the comments regarding the Consent Decree disclose facts or considerations which indicate that the Consent Decree is inappropriate, improper, or inadequate. Settling Defendants consent to the entry of this Consent Decree without further notice.

116. If for any reason the Court should decline to approve this Consent Decree in the form presented, this agreement is voidable at the sole discretion of any Party and the terms of the agreement may not be used as evidence in any litigation between the Parties.

XXXIII. SIGNATORIES/SERVICE

117. Each undersigned representative of a Settling Defendant to this Consent Decree and the Assistant Attorney General for the Environment and Natural Resources Division of the Department of Justice certifies that he or she is fully authorized to enter into the terms and conditions of this Consent Decree and to execute and legally bind such Party to this document.

118. Each Settling Defendant hereby agrees not to oppose entry of this Consent Decree by this Court or to challenge any provision of this Consent Decree unless the United States has notified Settling Defendants in writing that it no longer supports entry of the Consent Decree.

119. Each Settling Defendant shall identify, on the attached signature page, the name, address and telephone number of an agent who is authorized to accept service of process by mail

on behalf of that Party with respect to all matters arising under or relating to this Consent Decree. Settling Defendants hereby agree to accept service in that manner and to waive the formal service requirements set forth in Rule 4 of the Federal Rules of Civil Procedure and any applicable local rules of this Court, including, but not limited to, service of a summons. The parties agree that Settling Defendants need not file an answer to the complaint in this action unless or until the court expressly declines to enter this Consent Decree.

XXXIV. FINAL JUDGMENT

120. This Consent Decree and its appendices constitute the final, complete, and exclusive agreement and understanding among the parties with respect to the settlement embodied in the Consent Decree. The parties acknowledge that there are no representations, agreements or understandings relating to the settlement other than those expressly contained in this Consent Decree.

121. Upon approval and entry of this Consent Decree by ~~the~~ Court, this Consent Decree shall constitute a final judgment between and among the United States and Settling Defendants. The Court finds that there is no just reason for delay and therefore enters this judgment as a final judgment under Fed. R. Civ. P. 54 and 58.

SO ORDERED THIS 18 DAY OF February 2009.

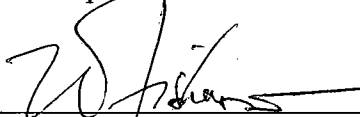
s/Ann Aldrich
United States District Judge

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of United States v. Lorain County Metropolitan Park District, et al., relating to the Ford Road Industrial Landfill CERCLA Site.

FOR THE UNITED STATES OF AMERICA

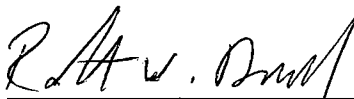
Date: _____

RONALD J. TENPAS
Assistant Attorney General
Environment and Natural Resources Division
U.S. Department of Justice



W. BENJAMIN FISHEROW
Deputy Chief, Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611
Ben Franklin Station
Washington, DC 20044

Date: 12/24/08



ROBERT W. DARNELL
Trial Attorney, Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611
Washington, D.C. 20044-7611

WILLIAM J. EDWARDS
United States Attorney

Date

By: /s Steven J. Paffilas
STEVEN J. PAFFILAS
Assistant U.S. Attorney
Reg. No. 0037376
United States Courthouse
801 West Superior Avenue
Suite 400
Cleveland, OH 44113
216-622-3698
216-522-2404
steven.paffilas@usdoj.gov

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of United States v.
_____, relating to the Ford Road Industrial Landfill CERCLA Site.

12-23-08

Date

Richard C. Karl

Richard C. Karl
Director, Superfund Division
U.S. Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

11-20-08

Date

Robert L. Thompson

Robert L. Thompson
Associate Regional Counsel
U.S. Environmental Protection Agency
Region 5
77 West Jackson Boulevard, C-14J
Chicago, Illinois 60604

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of United States v.
_____, relating to the Ford Road Industrial Landfill CERCLA Site.

FOR LORAIN COUNTY METROPOLITAN PARK DISTRICT

10/10/08
Date

Signature: [Signature]
Name (print): James D. Martin
Title: Director
Address: 12442 Dingman Road
Los Grove, Ohio 44081

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name (print): Dennis M. O'Toole
Title: Legal Counsel
Address: 5455 Detroit Road
Sheffield Village, Ohio 44054
Ph. Number: (440) 930-4001

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of United States v.
_____, relating to the Ford Road Industrial Landfill CERCLA Site.

FOR GOODRICH CORPORATION

Date

Signature: _____

Name (print): _____

Title: _____

Address: _____

Bruce Amick
Bruce Amick
Director Remediation
2730 West Tyvola Rd
Charlotte NC
28217

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name (print): _____

Title: _____

Address: _____

Ph. Number: _____

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of United States v.
_____, relating to the Ford Road Industrial Landfill CERCLA Site.

FOR BROWNING-FERRIS INDUSTRIES OF OHIO, INC.

Date _____

Signature: _____

Name (print): _____

Title: _____

Address: _____

JL White

Jo Lynn White

Corporate Secretary

18500 North Allied Way

Phoenix, AZ 85054

480-627-2700

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name (print): _____

Title: _____

Address: _____

Ph. Number: _____

Jonathan Haden

Lathrop & Gage, LC

2345 Grand Blvd, Suite 2800

Kansas City, MO 64108

816-460-5813

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of United States v.
_____, relating to the Ford Road Industrial Landfill CERCLA Site.

FOR FORD MOTOR COMPANY

Date

Signature: 

Name (print): Louis J. Ghilardi

Title: Assistant Secretary

Address: One American Road
1033 A-3
Dearborn, MI 48126

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name (print): Michael Burgin

Title: Attorney

Address: 3 Parklane Blvd, Suite 1500W
Dearborn, MI 48126

Ph. Number: 313-248-7746

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of United States v.
_____, relating to the Ford Road Industrial Landfill CERCLA Site.

FOR GENERAL MOTORS CORPORATION

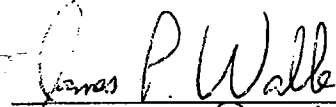
Date

Signature:

Name (print):

Title:

Address:


JAMES P. WALLE P31198
ATTORNEY - GM Legal Staff
General Motors Corporation
M/C 482-224-D24
300 Renaissance Center
Detroit, MI 48265

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name (print):

Title:

Address:

Ph. Number:

CASSANDRA Weaver
Legal Assistant
General Motors Corporation
M/C 482-224-D24
300 Renaissance Ctr; Detroit, Michig
313 665-2508 48265

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of United States v. _____, relating to the Ford Road Industrial Landfill CERCLA Site.

CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY, for itself and on behalf of KEWANEE INDUSTRIES, INC.

Date 10/8/08

Signature:

Name (print):

Title:

Address:

Robert R. John

Robert R. John

Assistant Secretary

*Chevron Environmental Management Company
10111 Bollinger Canyon Road
San Ramon, CA 94583*

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name (print):

Title:

Address:

Ph. Number:

Corporation Service Company

*50 West Broad Street
Suite 1800*

Columbus, OH 43215

800-222-2122

CC 2021948v2

APPENDIX A

Ford Road Industrial Landfill

Elyria, Ohio
Lorain County

Record of Decision



**United States
Environmental Protection Agency**

Region 5

September 2006

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APPENDICES

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LIST OF ACRONYMS AND ABBREVIATIONS

AOC	administrative order on consent
ARAR	applicable or relevant and appropriate requirement
ATSDR	Agency for Toxic Substances and Disease Registry
amsl	average mean sea level
bgs	below ground surface
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CIP	Community Involvement Plan
COPC	contaminant of concern
COPC	chemical of potential concern
CSM	conceptual site model
Eco-SSL	Ecological Soil Screening Levels
EOLP	Erie/Ontario Lake Plain
EPA	Environmental Protection Agency
ESL	Ecological Screening Level
FS	feasibility study
HAS	Health Administration Service
HHE	human health evaluation
IMZM	Inside Mixing Zone Maximum
IRIS	Integrated Risk Information System
LNAPL	Light Non-Aqueous Phase Liquid
MCL	maximum contaminant level
MetroParks	Lorain Metropolitan Park District
MW	Monitoring Well
mg/kg	milligrams per kilogram
NCP	National Contingency Plan
NPL	National Priorities List
ODH	Ohio Department of Health
OMZA	Outside Mixing Zone Average
OU	Operable Unit
O&M	Operation and Maintenance
PAH	poly aromatic hydrocarbon
ppm	part per million
PCB	polychlorinated biphenyl
PEC	probable effects concentration
PRP	Potentially Responsible Party
PRG	Preliminary Remediation Goal
RAGS	Risk Assessment Guidance for Superfund
RAO	remedial action objective
RBC	risk based concentration
RI	remedial investigation
RI/FS	remedial investigation/feasibility study

RME	reasonable maximum exposure
ROD	Record of Decision
SARA	Superfund Amendments and Reauthorization Act
SF	slope factor
SVOCs	semi-volatile organic compounds
TBC	to be considered
TEC	threshold effects concentration
ug/kg	microgram per kilogram
U.S. EPA	United States Environmental Protection Agency
VOCs	volatile organic compounds

Record of Decision – Ford Road Industrial Landfill

Elyria, Ohio

This Record of Decision (ROD) documents the remedy selected for the Ford Road Industrial Landfill Site in Lorain County, Ohio. The ROD is organized in two sections: Part I contains the *Declaration* for the ROD and Part II contains the *Decision Summary*. The *Responsiveness Summary* is included as Appendix A.

PART I: DECLARATION

This section summarizes the information presented in the ROD and includes the authorizing signature of the United States Environmental Protection Agency (U.S. EPA) Region 5 Superfund Division Director.

Site Name and Location

The Ford Road Industrial Landfill Site (CERCLIS # OHD980510002) is located in Elyria, Lorain County Ohio, about 1.5 miles from Interchange 8 of the Ohio Turnpike Interstate 90. The Ford Road Industrial Landfill Site is a 15-acre inactive facility situated in the northern end of Elyria on Ford Road.

Statement of Basis and Purpose

This decision document presents the selected remedy for the Ford Road Industrial Landfill Site (Ford Road Landfill). The remedy was chosen in accordance with the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA), and, to the extent practicable, the National Contingency Plan (NCP). Information used to select the remedy is contained in the Administrative Record file for the Site. The Administrative Record file is available for review at the U.S. EPA Region 5 Records Center, 77 West Jackson Boulevard, Chicago, Illinois, and at the Elyria Public Library – West River Branch, 1194 West River Road, Elyria, Ohio.

Assessment of the Site

The response action selected in this ROD is necessary to protect the public health or welfare or the environment from actual or threatened releases of hazardous substances into the environment.

Description of Selected Remedy

The Ford Road Industrial Landfill Site is being addressed as one Operable Unit (OU) under the framework set forth in CERCLA. The selected remedy specified in this ROD will serve as the final action for the Site. The selected remedy specifies response actions through surface cover enhancement, hot spot removal, and imposition of institutional controls and future monitoring that will address contaminated soils/sediments, a source area, and groundwater at the Site. U.S. EPA believes the response actions outlined in this ROD, if properly implemented, will protect human health and the environment.

The selected remedy consists of re-grading to improve surface water control over the extent of the landfill and the placement of additional low-permeability material over those areas of the landfill that do not currently meet the 2-foot requirement of Ohio EPA (add citation to ARAR). The areas requiring enhancement of the existing cover are primarily on the northern and southern slopes of the landfill. The possibility of slope modifications will be addressed during the design phase of the remedy implementation. Landfill waste that has, over time, cascaded over the sides of the landfill and remains exposed will be consolidated within the existing or extended limits of the landfill or be disposed of at a licensed facility, if necessary.

Upon completion of cover enhancements and removal of exposed wastes and, if necessary, side slope modifications, a continuous 2-foot cover or an equally protective cover approved by the U.S. EPA will be placed over the entire landfill. This enhanced cover over the entire landfill will reliably contain the landfill wastes and will also serve to mitigate any of the waste material from contaminating water that infiltrates through the landfill itself, passing through soil and sediment, and then flowing into the Black River.

In addition, the remedy will include the removal of a select soil and sediment hotspot located just outside of the landfill limits in the northeastern corner of the Site. While installing a monitoring well during the investigation, a Light Non-Aqueous Phase Liquid (LNAPL) was found to contain high levels of polychlorinated biphenyl (PCB) contaminated motor oil. This LNAPL was found to be migrating into the Black River from a small source area. The selected remedy will include removing the impacted sediment at the edge of the river, extending back toward the toe of the landfill slope. This will remove all impacted soil in the preferential migration pathway along which the LNAPL has likely migrated toward the edge of the river from surface water infiltrating through the landfill.

The LNAPL found at the northeastern corner of the Site could be termed a principal threat if it were to remain in place. Parts of the remedy (surface cover enhancement and hot spot removal) will, however, alleviate the principal threat by ensuring adequate cover to prevent the infiltration of water through the landfill which could aid in the migration of the LNAPL. More importantly by removing the source area, the selected remedy will remove the principal threat.

The major components of the selected remedy include:

- The enhancement of the existing landfill cover and the placement of additional low-permeability material over those areas of the landfill that do not currently meet the 2-foot minimum requirement (typically the areas on the northern and southern side slopes of the landfill. To the extent practicable, existing cover materials will be reused. This may involve moving materials from the top of the landfill where the cover is in excess of two feet thick.
- Vegetation will need to be removed to accomplish the cover enhancements along the landfill slopes. This will involve removing any vegetation within the landfill footprint itself and ensuring that trees and shrubs remaining close to the landfill footprint will not compromise the new landfill cover. Actions to maintain stable slopes will also be performed (e.g., appropriate replacement vegetation and/or slope stabilizing controls). The landfill will then be revegetated with native vegetation.
- Cascaded waste found over an approximately 5,000 square foot area on the northern slope of the landfill and an approximately 15,000 square foot area on the southern slope of the landfill (both areas are located outside the actual boundary of the landfill) will be addressed by consolidating the waste within the existing or extended limits of the landfill. If determined to be necessary, the waste will be disposed of at a licensed facility. It is assumed that a limited amount of the material will require offsite disposal and most of the material will be consolidated within the limits of the landfill. Material consolidated within the limits of waste will be placed in lifts and compacted in areas on the top of the landfill after the existing cover has been stripped for reuse. Surficial wastes will be removed to native material, unless the underlying material exceeds regulatory limits. Backfill will only be expected to be placed in these areas, as required, to result in appropriate stable slopes beyond the limits of the landfill, depending on the final grade.
- Modifications to the existing cap may affect the stability of the side slopes of the landfill. It is assumed that the North End Slope, Southern End Slope, the northern portion of the Eastern Side Slope, and approximately half of the southern portion of the Eastern Side Slope (approximately 73,000 square feet, total) may require stabilization. However, the exact extent will be based on evaluations made as part of the Remedial Design phase.
- A detailed analysis of the slope stability will be conducted during the Remedial Design phase. Should this analysis show that further modifications are required to maintain slope stability during and after cap modifications, possible response actions could include laying back the side slopes from the existing toe, extending the existing toe with appropriate adjustment of the side slopes, or adding a structural enhancement at the existing toe then adjusting the side slopes from the top of the structure. Laying back the slopes from the existing toe to a 3:1 slope would require the removal of approximately 250,000 cubic yards of existing cap and fill material, while a 4:1 slope would require the removal of approximately 515,000 cubic yards of existing cap and fill material. Installing a structural enhancement at the existing toe would be expected to significantly decrease this volume. Further evaluation of these options, if necessary, will be part of the Remedial

Design phase. It is assumed that excavated materials would be placed under the enhanced cap. However, it is possible that part of this material may need to be disposed of at an appropriately licensed offsite facility.

- Upon completion of this portion of the remedy, the Ford Road Landfill will have a continuous 2-foot cover of approved material encompassing the entire landfill limits with all of the currently exposed wastes either contained within the existing landfill or shipped off-site for disposal.
- Removing selected soil/sediment observed to contain high levels of PCBs outside of the landfill limits in the northeast corner of the Site. The removal depth is assumed to be approximately four feet. Additional sampling data will be collected during the Remedial Design stage to determine the actual extent of contamination before this alternative is implemented.
- The excavation will remove the impacted sediment at the edge of the river and then extend back toward the toe of the landfill slope. It is conservatively assumed that up to 6,400 cubic yards of soil may need to be removed, although the actual removal limits and depth will be determined during the Remedial Design stage. To the degree practicable, non-impacted surface soil will be removed, stockpiled, and characterized, which could significantly reduce the volume of soil requiring disposal. Excavated materials that are demonstrated to not have been adversely impacted by chemicals of concern (COCs) will be used either in construction of landfill cover improvements or placed under the cap within the landfill with U.S. EPA's and Ohio EPA's approval. Impacted soils which are not appropriate for placement under the cap will be sent offsite for disposal. The excavated areas will be backfilled, as required to establish surface contours, with clean, compacted, low permeability fill and revegetated. A reducing media may be used or added to the backfill if necessary.
- Regular monitoring including inspections, groundwater sampling and other monitoring activities will occur at the Site. Institutional controls will also be implemented at the Site generally consisting of nonintrusive legal and/or administrative controls that reduce potential exposure to impacted materials and/or to mitigate the potential for jeopardizing the integrity of the remedy. Typical institutional controls involve the placement of deed restrictions on the property to prevent intrusive actions and future development that potentially would increase human exposure, such as residential zoning, daycare facilities, or drinking-water wells. It is anticipated that all institutional controls will be implemented by the Responsible Parties or Respondents.

Statutory Determinations

The selected remedy is protective of human health and the environment, complies with federal and state requirements that are applicable or relevant and appropriate to this remedial action, is cost-effective, and utilizes permanent solutions and alternative treatment technologies (or

resource recovery) to the maximum extent practicable and satisfies the statutory preference for remedies that employ treatment that reduces toxicity, mobility, or volume as a principal element. Because this remedy will result in hazardous substances, pollutants or contaminants remaining on-site at levels greater than those that allow for unlimited use and unrestricted exposure, a statutory review will be conducted within five years after initiation of remedial action to ensure that the remedy is, or will be protective of human health and the environment.

Data Certification Checklist

The following information is included in the Decision Summary section (Part II) of this ROD. Additional information can be found in the Administrative Record file for this Site.

- Contaminants of concern and their respective concentrations (Section 5);
- Baseline risk represented by the contaminants of concern (Section 7);
- Cleanup levels established for contaminants of concern and the basis for these levels (Section 8);
- How source materials are not considered a principal threat (Section 11);
- Current and reasonably anticipated future land use assumptions used in the baseline risk assessment and ROD (Sections 6 and 7);
- Potential land use that will be available at the Site as a result of the selected remedy (Section 12);
- Estimated total present worth costs and the number of years over which the remedy cost estimates are projected (Sections 9 and 12); and
- Key factors that led to selecting the remedy (Sections 10 and 12).

Support Agency Acceptance

Although the State of Ohio has not yet provided a concurrence letter for this ROD, the State has indicated that it intends to concur with the selection of Alternative 3 and Alternative A for the Ford Road Industrial Landfill Site. The State of Ohio's concurrence letter will be added to the Administrative Record upon receipt.

Authorizing Signature

Richard C. Karl, Director
Superfund Division
United States Environmental Protection Agency, Region 5

Date

Record of Decision – Ford Road Industrial Landfill

Elyria, Ohio

PART II: DECISION SUMMARY**1.0 Site Name, Location and Brief Description**

The Ford Road Landfill is a 15-acre inactive facility located in Elyria, Lorain County, Ohio. The Site is located on the northern edge of Elyria on Ford Road, about 1.5 miles from Interchange 8 of the Ohio Turnpike, Interstate 90 (Figure 1). The Site is not fenced and is accessible from all sides. Several residences are located within one mile of the site with the nearest being about 200 feet northwest of the site. The Site is bordered by an intermittent stream and a sewer main that is covered with riprap to the north, a ravine and rural land to the south, the Black River to the east, and Ford Road and the Black River Preserve to the west. Site topography is characterized by the gently sloping top surface of the landfill which descends from an elevation of approximately 690 feet above mean sea level (amsl) at the western boundary of the Site along Ford Road to an elevation of approximately 680 feet amsl at the top of the slope around the northern, eastern, and southern edge of the landfill surface. The northern, eastern, and southern flanks of the landfill slope steeply down to the 100-year flood plain of the Black River at an elevation of approximately 610.9 feet amsl. A swale, oriented approximately north-south, was constructed along the western edge of the landfill. The swale directs runoff into a stormwater drain that discharges into the intermittent stream which is a crushed stone-filled drainage feature that extends from Ford Road to the Black River immediately north of the Site.

Figure 2 illustrates the layout of the landfill. The top of the landfill appears to have an adequate cover of low-permeability soil. Landfill wastes are covered on the top of the landfill, with the exception of some wastes, miscellaneous debris, and white goods that are located along the southern and northern landfill side slopes. The landfill top is well graded and gently slopes west to east with an eastern side slope grade approaching 2.5:1 Height:Vertical ratio, while the north and south side slopes of the landfill are steep with grades of approximately 1.2:1 Height:Vertical ratio. The cap and slope coverings of the landfill are generally intact and support healthy vegetation (grass and tree/shrub growth). There is, however, some evidence of waste and soil erosion occurring on the steep northern and southern side slopes. No landfill gas has been observed migrating through the existing cap at the Ford Road Site and a gas monitoring system is in place at the Site.

The Ford Road Landfill is being addressed as a Superfund Alternative Site. The Potentially Responsible Parties (PRPs) are therefore allowed to lead in the investigation of the Ford Road Site, with U.S. EPA oversight. Because this is a voluntary action by the PRPs the Site is not listed on the National Priorities List (NPL). The PRP Group for the Ford Road Site signed an Administrative Order of Consent (AOC) in 2001 to complete a Remedial

Investigation/Feasibility Study (RI/FS) at Ford Road Landfill. The Ford Road PRP Group began the RI/FS at the Ford Road Site in 2003 and both U.S. EPA and Ohio EPA provided oversight of the Ford Road PRP Group's work under the AOC. The Ford Road Group completed the *Remedial Investigation/Feasibility Study Report, Ford Road Landfill, Elyria, Ohio* in 2006. U.S. EPA anticipates that the design and implementation of the remedy selected in this ROD will be carried out by the Ford Road PRP Group under a federal consent decree.

2.0 Site History and Enforcement Activities

2.1 Source of Contamination

Landfilling activities are believed to have begun with the placing of local municipal waste into the ravine extending east from Ford Road in the early 1900s. Available records indicate that Brotherton Disposal Company, Brotherton Disposal, Inc., and Browning-Ferris Industries of Ohio, Inc. operated a landfill at the Ford Road Site for various periods in the 1960s and early 1970s. In 1972, Brotherton Disposal, Inc., merged with Browning-Ferris Industries of Ohio. According to Lorain County Records, George C. Brotherton and Phyllis J. Brotherton, doing business as Brotherton Disposal and later as Brotherton Disposal, Inc., leased the landfill from Jack Joseph from 1964 to 1973. In 1973, Brotherton Disposal Inc. leased the landfill from the Lorain County Metropolitan Park District. During operation of the landfill in the 60s and 70s, municipal and various industrial wastes in drums and in bulk were accepted, including, but not limited to: 700 tons of hazardous material; 3.3 million pounds of chemical wastes; and 32,000 gallons of sludge per day from 1963 to 1970, and many of these wastes were burned onsite. Foundry sand, slag, and dried sludges were often used for cover material. Landfill operations ended in 1974, but the landfill was not closed under U.S. EPA guidelines. The current owner of the Site is the Lorain County Metropolitan Parks District (MetroParks).

2.2 Previous Investigations

2.2.1 Field Investigations

Past investigations at the Ford Road Landfill appear to have begun in the early 1970s. An Ohio EPA sanitary landfill inspection form reported conditions observed at the landfill on December 21, 1972, including the presence of leachate near the northeastern corner of the Site. It was further observed that insufficient cover material was present for the landfill. An inspection of the landfill in June 1976 documented improved conditions, although it indicated continued concerns regarding adequacy of cover and an observation of the leachate in the northeastern corner of the Site. On September 30, 1980, a site inspection was performed by the U.S. EPA. During the inspection, leachate was reportedly observed to be entering the Black River at the northeastern corner of the Site. The analytical results (dated October 20, 1980) for both one leachate sample and one sediment sample collected from observed seepage points located between the northeastern toe of the landfill and the Black River showed detectable concentrations of ammonia, lead, boron, cadmium, zinc, barium, chromium, titanium, tetrahydrofuran, dimethylbenzene, ethylbenzene, 3,3,5-trimethylcyclohexanone, trimethylcyclohexanol, 1,1

oxybisbenzene, methylenebisbenzene, and bis(2-ethylhexyl)phthalate. The sediment sampled contained bis(2-ethylhexyl)phthalate, phenol, methylphenol, 1H-Indole, tetradecanediols, and PCBs.

An Evaluation of the Potential for Groundwater Contamination at the Ford Road Site was prepared by a U.S. EPA contractor, E&E, on behalf of the U.S. EPA, dated October 16, 1981. This evaluation concluded that impacts to the deeper bedrock aquifer were unlikely due to the relatively impermeable shale cap rock. In addition, the evaluation determined that potential impacts to groundwater in the overburden could impact the Black River and should be evaluated by installing and sampling four to five wells. On August 23 and 24, 1982, three shallow overburden monitoring wells (MW-1, MW-2, and MW-3) were drilled and installed by ATEC Environmental Consultants. One borehole was also advanced upgradient of the site; however, no groundwater was encountered above the shale bedrock and no monitoring well was installed at this location.

A preliminary assessment of the Ford Road Landfill was prepared by E&E on behalf of the U.S. EPA, dated January 5, 1983. Based on an evaluation of available information from the field investigation team files, Ohio EPA files, and U.S. EPA Region 5 files, additional information was considered necessary to assess potential impacts to groundwater, surface water, and/or soil. On July 20, 1983, during a site inspection, E&E collected groundwater samples from each of the three existing monitoring wells at the Site on behalf of the U.S. EPA. Two of the samples were found to contain low concentrations of acetone and alphas benzene hexachloride. A third sample contained methylene chloride.

On January 10, 1994, a U.S. EPA contractor, PRC Environmental Management, Inc. submitted the *Expanded Site Inspection Report*. The activities completed by PRC included an inspection of the site on March 8, 1993, during which a leachate seep was observed flowing toward the Black River near the northeastern corner of the Site. On May 18, 1993, PRC sampled soil, surface water, sediment, and groundwater at the Site. PCB (Aroclor-1254), delta-BHC, alpha chlordane, calcium, lead, and zinc were detected in one or more sediment samples. No hazardous substances were identified at levels above background in surface water samples. Also, 1,1-dichloroethene, potassium, and sodium were detected in one or more of the groundwater samples. Arsenic, barium, manganese, and nickel were also detected at elevated concentrations in both sediment and groundwater.

Browning-Ferris Industries of Ohio conducted monthly methane gas monitoring from February 8, 1989 through January 31, 1994. This monitoring program involved monitoring for methane gas at 10 locations across the landfill during each monitoring event. The monitoring results showed 0% of the lower explosive limit and 0% by volume from all locations during each monitoring event implemented. A landfill gas monitoring system was formally approved by Ohio EPA in early 2006 and sampling results have shown that no landfill gas is migrating through the existing cap.

In 1980, with the approval of the U.S. EPA and the MetroParks, Browning-Ferris of Ohio implemented a voluntary response action involving the addition and grading of cover soil (including placing up to 7.5 feet of low-permeability cover materials) to intercept and contain reported observations of leachate emanating from the Site. In addition, some refuse observed near the river was removed and transported to the Lorain County Landfill.

Ohio EPA has collected much in the way of fish tissue data in the Black River as part of its state program. Currently, the Black River has a fish advisory for Common Carp for PCBs and a PCB and mercury advisory for Freshwater Drum. The specific PCB Aroclor that has been found in fish throughout the Black River watershed, specifically downstream of Ford Road Landfill, does not match the PCB Aroclor that was found at elevated levels at the Site. However, through sediment sampling and the observation of black stained soil along the bank of the river adjacent to the Site conducted during the RI at Ford Road Landfill, it is apparent that a small amount of PCB contamination is entering into the Black River and could pose a risk to the ecological community residing in the river.

2.2.2 ODH Health Assessment

In 2001, the Health Assessment Section (HAS) of the Ohio Department of Health (ODH) was asked by the U.S. EPA to evaluate site conditions and available sampling results at the Ford Road Landfill to determine if any contaminants present at the Site could pose a health threat to humans in the vicinity of the landfill. The Ford Road Landfill Health Consultation was prepared by the ODH under a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR). The Division of Health Assessment and Consultation, ATSDR, reviewed this public health consultation and concurred with the findings.

Based upon ODH's review, it was determined that the main pathway of concern was contact or ingestion of surface water or sediments near the northeastern corner of the Site by the Black River and the Black River itself. It was stated that the Black River near the Site supports a viable fish population and may be regularly fished by area residents. It was also indicated that eating contaminated fish from the Black River could be a pathway of concern depending on the current level of contamination in the river and the kinds of chemicals present. Prior to this consultation, environmental data for the site was extremely limited with the most recent sampling occurring in 1993. ODH stated that to adequately assess the threat to human health, it would be necessary to conduct a more thorough investigation of the site to characterize the potential for site contaminants that would migrate to the Black River.

Other potential hazards at the site that were identified during this assessment included the physical hazards present along the steep side slopes of the landfill. The Site was and still remains unfenced providing easy access to the Site. Crushed drums and exposed waste found along the northern and southern edges of the landfill posed a physical threat anyone venturing on the sides of the landfill. There were also several areas of exposed ash found during the assessment that were of unknown origin and could have possibly contained hazardous constituents, posing a health threat to those who came into contact with this area.

After ODH assessed the Site, they made the following recommendations:

1. A thorough environmental investigation of the Site, including surface soil, groundwater, sediment, and landfill gas should be completed at the Site to better characterize the levels of hazardous waste in the landfill and the extent of impact on the surrounding environment.
2. Access to the Site should be restricted so as to reduce the possibility that children or others could injure themselves on the exposed drums and waste that are present at the landfill.
3. Since contamination is present in the sediments or surface water of the river, Ohio EPA may need to sample fish tissue in the Black River adjacent to the Site for site related contaminants, including PCBs.

2.3 Previous Response Actions

In 1980, with the approval of the U.S. EPA and the MetroParks, Browning Ferris Industries of Ohio implemented a voluntary response action involving the addition and grading of cover soil (including placing up to 7.5 feet of low-permeability cover materials) on the top of the landfill. This was done in order to help intercept and contain the reported observations of leachate emanating from the northeastern corner of the Site. In addition to the placement of cover material, some refuse that was observed along the edge of the landfill near the river was removed and transported to the Lorain County Landfill.

2.4 Enforcement Activities

In July 2002, an AOC was signed by Browning-Ferris Industries of Ohio, PolyOne Corporation, Goodrich Corporation, Ford Motor Company, General Motors Corporation, Chevron Environmental Management Company & Kewanee Industries Incorporated (a.k.a. Ford Road Group) and U.S. EPA, which required the Ford Road Group to conduct a RI/FS. The RI/FS work described in this ROD was conducted by the Ford Road Group under the terms of the 2002 AOC, with oversight by U.S. EPA and Ohio EPA.

3.0 Community Participation

The Proposed Plan for the Ford Road Landfill was made available to the public for comment near the end of June 2006. Copies of the Proposed Plan and the final RI and FS (as well as other supporting documents) were placed in the local Information Repositories located at the Elyria Public Library – West Branch. Documents are also available at the U.S. EPA Records Center in Chicago, Illinois. Copies of the Proposed Plan were mailed to approximately 100 interested persons on U.S. EPA's community involvement mailing list for the Site. Copies of all documents supporting the remedy outlined in the Proposed Plan are located in the Administrative

Record file for the Site, located at the U.S. EPA Records Center, 77 West Jackson Boulevard, Chicago, Illinois and the Elyria Public Library – West Branch in Elyria, Ohio.

The public comment period ran from July 10 through August 9, 2006. U.S. EPA held a public meeting at the French Creek Nature Center in Sheffield Village, Ohio on July 26, 2006, to present the Proposed Plan and approximately 25 people attended. The notice announcing the public meeting and the availability of the Proposed Plan was published in the Elyria Chronicle-Telegram newspaper on July 6, 2006. A press release was issued on July 13, 2006, to alert media and the public about issuance of the Proposed Plan and the start of the public comment period. Representatives of U.S. EPA and Ohio EPA were present at the public meeting, as were representatives of the Ford Road Group, to answer questions regarding the proposed remedy. Responses to comments received during the public comment period (including comments received at the public meeting) are included in the Responsiveness Summary which is Appendix A of this ROD. These comments were considered prior to selection of the final remedy for the Ford Road Landfill.

U.S. EPA also developed a Community Involvement Plan (CIP) when RI/FS activities began at the Site in July 2004. The CIP, AOC, Proposed Plan, and any news releases were also posted to the U.S. EPA Region 5 website at <http://www.epa.gov/region5/sites/fordroad>

4.0 Scope and Role of Response Action and Operable Units

The U.S. EPA has designated all of the work to be performed at Ford Road Landfill under one Operable Unit, which includes a remedy that will address both the existing soil and groundwater contamination and removing an on-going source of sediment, soil and groundwater/surface water contamination.

4.1 Operable Unit – Sitewide OU

Soils, Source Area and Groundwater/Surface Water: The Ford Road Landfill is being addressed as one sitewide OU, and the remedy implemented at the Site will focus on contaminated soils, source area, and groundwater/surface water contamination. The source of the contamination is discussed more fully in Section 2.1 of this ROD. The contaminants at the Ford Road Landfill originated from the collection and disposal of various waste products at the facility during its operational period. When operations ceased at the landfill, any contaminated waste materials remained within the landfill. As part of a voluntary action, cover material was placed upon the top of the landfill to help in preventing surface water from infiltrating directly into the landfill wastes. The Site is being addressed under the framework set forth in CERCLA. The remedial action for the Site addresses contaminated soil and exposed waste material on the side slopes of the landfill, soil and sediment contaminated with PCBs in the northeastern corner of the Site and eliminates the infiltration of water through the landfill preventing any further groundwater/surface water contamination. The remedial action will also eliminate current risks to human health and ecological receptors by eliminating potential exposure to PCB-contaminated soil and sediment and will also eliminate potential migration of PCBs from the hot spot area of

contamination (via surface water infiltration) into the Black River thereby eliminating potential risks to aquatic receptors.

5.0 Site Characteristics

5.1 Conceptual Site Model for Ford Road Landfill

The conceptual site model (CSM) provides an understanding of the Site based on the sources of the contaminants of concern, potential transport pathways and environmental receptors. Figure 3 pictorially depicts a simplified CSM for the Ford Road Landfill Site. Based on the nature and extent of the contamination and the fate and transport mechanisms described in the RI/FS Report, the CSM includes the following components:

- Landfill waste material presents a risk from surface soils, particularly on the northern and southern side slopes of the landfill. Elevated levels of metals, particularly lead, were found in these areas and pose risks to the “trespasser”, “worker” or “recreational” user by either dermal, ingestion or inhalation of the surface soil.
- In the northeastern corner of the Site, surface water has infiltrated into the landfill, thereby becoming contaminated with elevated levels of PCBs associated with the LNAPL found in that area as it flows out into the Black River. The surface water poses a risk for “trespassers” and “recreational” users for exposure through ingestion and dermal contact.
- Since PCB contaminated groundwater is entering into Black River surface waters, there is a risk to the “recreational” user who eats fish from certain areas of the Black River. Of special concern is bioaccumulation, since aquatic organisms can accumulate chemicals (including PCBs) in their bodies when they are exposed to these chemicals through water, their diet, and other sources.
- Again, since PCB contaminated groundwater is entering into Black River surface waters, there is a risk of dermal exposure and ingestion for both “trespassers” and “recreational” users of the Site who come into contact with contaminated sediment along the northeastern corner of the Site.

5.2 Site Overview

The Ford Road Landfill Site is a 15-acre inactive facility located in Elyria, Lorain County, Ohio. The Site is located on the northern edge of Elyria on Ford Road, about 1.5 miles from Interchange 8 of the Ohio Turnpike, Interstate 90. The Site is bordered by an intermittent stream and a sewer main that is covered with riprap to the north, a ravine and rural land to the south, the Black River to the east, and Ford Road and the Black River Preserve to the west. The approximate geographic coordinates of the Site are 41° 22' 26.0" N latitude and 082° 07' 30.0" W longitude. The U.S. EPA spill identification number is 0574, and the U.S. EPA facility identification number is OHD 980510002. There are no buildings remaining on the Site. A

surface water drainage system was constructed during the voluntary cover placement to assist in directing surface water off of the landfill.

The top of the landfill has an adequate cover of low-permeability soil. Landfill wastes are largely covered, with the exception of some wastes, miscellaneous debris, and white goods that are located along the southern and northern sides of the landfill. The landfill top is well graded and gently slopes west to east with an eastern side slope grade approaching 2.5:1 Height:Volume ratio while the northern and southern side slopes of the landfill are steep with grades of approximately 1.2:1 Height:Volume ratio. The cap and slope coverings of the landfill are generally intact and support healthy vegetation (grass and tree/shrub growth). There is, however, some evidence of waste and soil erosion occurring on the steep northern and southern slopes. A gas monitoring system was put in place by the MetroParks in 2005 and 2006 and recent sampling has shown that no landfill gas has been migrating through the existing cap at the Site.

The Site is located within the Berea Headlands section of the Huron-Erie Lake Plains physiographic region of Ohio. The near-surface geology in the Site vicinity is generally characterized by the presence of glacially derived, wave-planed, ground moraine deposits from the Wisconsin epoch and more recent lake deposits. The overburden materials encountered in the subsurface at this Site consist primarily of gray to brown silty clay and clayey silt, with trace to some sand and gravel. The overburden materials encountered upgradient of the Site are of glacial till deposits consisting predominantly of low permeability silt and clay. These glacial till deposits are likely to mantle the top of bedrock and extend down the slope toward the river under the majority of the Site. The native overburden materials encountered above the bedrock within the flood plain of the Black River are composed of a series of alluvial deposits consisting of lenses of sand, clay and silt. Groundwater flow within the overburden downgradient of the Site would be expected to preferentially follow the higher permeability sand lenses. Overlying the native overburden deposits immediately beyond the northeastern toe of the landfill is a wedge of fill materials composed primarily of clay and silt with some sand, broken glass, wood, and traces of slag. This wedge of fill material is approximately 10 feet thick immediately beyond the toe of the landfill slope and tapers in thickness toward the bank of the river. This fill material appears to have been placed beyond the toe of the landfill slope in conjunction with the documented response action implemented in 1980. At the base of this wedge of fill material is a discontinuous layer of sand which appears to extend toward the edge of the river.

Bedrock was encountered at depths ranging from 12.5 to 28.5 feet below grade and is composed of red to black fissile shale. The shale bedrock formation encountered below the Site is likely the Ohio Shale formation of Devonian age, and the red Bedford Shale formation of Mississippian age. Boring logs of wells in the general Site vicinity also observed red and black shale bedrock to depths of up 100 feet below grade. Bedrock does not appear at the ground surface or along the bank of the Black River on-Site, whereas an outcrop of red shale is evident along the access road to the south and black shale is visible in the bank of the Black River opposite the Site. According to an Ohio DNR survey of the groundwater resources in Lorain County, wells located in the Site vicinity indicate that the shale bedrock has low hydraulic conductivity, with developed capacities reportedly ranging from 0 gallons per minute to 3 gallons per minute.

Groundwater was encountered within the shallow overburden materials above the bedrock at seven monitoring wells located along the eastern toe of the former landfill. Groundwater present above the bedrock in the Site vicinity flows in an easterly direction and discharges into the Black River, which forms the east Site boundary. The groundwater flow from the Site discharges to the Black River at the downgradient edge of the Site. Groundwater in the bedrock aquifer is anticipated to be protected from significant impacts by the landfill due to the relatively impermeable nature of both the mantle of glacial till materials which likely overlie the bedrock under most of the Site and the relatively impermeable nature of the shale bedrock underlying the Site. Groundwater flow within the overburden deposits underlying the Site also discharges to the Black River (Figure 4). By employing Darcy's Law, an estimate of the groundwater flow discharging to the Black River from along the downgradient Site boundary was calculated. The estimated groundwater flux to the Black River was estimated to be approximately 14,053 cubic feet per day (105,100 gallons per day).

5.3 Sampling Strategy

A work plan that presented the scope of work for the RI was approved by the agencies and work was initiated in 2003. All RI investigation activities were conducted by the Ford Road Group under the supervision of U.S. EPA and Ohio EPA. Field investigation activities conducted as part of the RI included:

- ✓ Evaluation of existing landfill cover;
- ✓ Geophysical investigations (electromagnetic conductivity surveys, seismic survey, soil gas survey);
- ✓ Landfill slope evaluation;
- ✓ Surface water management evaluation;
- ✓ Monitoring well drilling and installation;
- ✓ Soil borings and samples;
- ✓ Test pit soil sampling;
- ✓ Sediment and surface water sampling;
- ✓ Leachate seep sampling;
- ✓ Groundwater sampling;
- ✓ LNAPL investigation;
- ✓ Aquifer testing;
- ✓ Soil hydraulic conductivity testing;
- ✓ Residential well survey; and
- ✓ Topographic mapping and surveying.

5.4 Source of Contamination

As discussed in Section 2.1 of this ROD, the contaminants from the Ford Road Landfill originated from the collection and disposal of various industrial and municipal wastes. Municipal wastes were accepted at the landfill from the early 1900s until around 1960 when

other industrial and some hazardous wastes were accepted and often burned at the landfill. Upon closure of the landfill, wastes remained on-site within the landfill. The landfill was partially covered during a voluntary response action in 1980, but some wastes were left exposed on the steep side slopes of the landfill. As previously noted, during the RI a hot spot area of PCB-contaminated soil and sediment was found along the northeastern edge of the Site, along the Black River. It is believed that surface water infiltrating through the landfill, especially near a surface water drain, and then passing through the waste material in the landfill contaminated this corner of the Site. An LNAPL was also found in this corner of the Site during the installation of MW-1 which led to further delineating the contaminated area.

5.5 Types of Contaminants and Affected Media

At the Site, surface water, groundwater, sediment, and soil were analyzed for a variety of contaminants. The investigations found were carefully evaluated in the Risk Assessment to determine the contaminants of potential concern (COPCs) and revealed which of these chemicals and affected media were most important in driving potential risk at the Site. These findings are summarized in Section 7 of this ROD, but extensive evaluation is found in the RI/FS Report.

5.6 Extent of Contamination

5.6.1 Soil Investigation and Results

(Semi Volatile Organic Carbon) SVOCs

The most prevalent SVOC found in the soil at the Site is benzo(a)pyrene, which was reported at concentrations above the U.S. EPA Region 9 Preliminary Remediation Goals (PRGs) in 27 soil samples ranging from 0.13 mg/ to 6.7 mg/kg. Benzo(a)anthracene was reported at concentrations above the PRGs in eight soil samples ranging from 0.86 mg/kg to 4.8 mg/kg. Benzo(b)fluoranthene was reported at concentrations above the PRGs in 14 soil samples ranging from 0.75 mg/ to 390 mg/kg. Benzo(k)fluoranthene was reported at concentrations above the PRGs in two subsurface soil samples at 340 mg/kg and at 9.6 mg/kg. Dibenzo(a,h)anthracene was reported at concentrations above the PRGs in 13 soil ranging from 0.12 mg/kg to 1.1 mg/kg. All of the above contaminants were found in both surface and subsurface soils. Ideno(1,2,3-cd)pyrene was reported at concentrations above the PRGs in four subsurface soil samples ranging from 0.77 mg/kg to 2.3 mg/kg.

All of the surface soil samples which were observed to contain SVOCs at concentrations exceeding their PRGs were located along either the northern or southern slopes of the landfill within those areas identified as having waste observed in the near surface cover materials.

PCBs

PCBs were detected above the PRG in 15 of the 43 soil samples analyzed. PCB aroclors with reported concentrations greater than the PRGs include Aroclor 1242 and Aroclor 1254. Aroclor

1242 was reported at concentrations above the PRGs in three soil samples; FR-HB10-S1 (0 to 2 ft below ground surface [bgs]) at 0.28 mg/kg, FR-HB11-S2 (2 to 4 ft bgs) at 4.5 mg/kg, and FR-SB-30-S3 (11 to 12 ft bgs) at 160 mg/kg. Aroclor 1254 was reported at concentrations above the PRGs in 15 soil samples (four surface and nine subsurface soils samples) ranging from 0.24 mg/kg (FR-HB5-S2 [2 to 4 ft bgs]) to 5.7 mg/kg (9 to 11 ft bgs).

As noted with regard to the SVOC exceedances, all of the surface soil samples which were observed to contain PCBs at concentrations exceeding their PRGs were located along either the northern or southern slopes of the landfill, with the highest along the northeastern corner of the Site, within those areas identified as having either waste observed in the near surface cover materials.

Metals

Table 1 below shows a comparison of the metals data for Ford Road Landfill compared to background data.

Metals (mg/kg)	Background Soil Concentrations		Site Soil Data		Maximum Site Soil Concentration Exceeds Background Concentration	Maximum Background Soil Concentration Exceeds PRGs	Maximum Site Soil Concentration Exceeds PRGs
	Range of Detections	Frequency of Detection	Range of Detections	Frequency of Detection			
Aluminum	8740 - 14400	8/8	1230 - 17000	39/39	X		
Antimony	0.74 - 1.9	8/8	0.6 - 114	33/39	X		X
Arsenic	2.4 - 11.5	8/8	2.8 - 85.5	39/39	X	X	X
Barium	19 - 71.4	8/8	21.8 - 2780	39/39	X		
Beryllium	0.48 - 1.0	8/8	0.12 - 2	39/39	X		
Cadmium	ND (0.02 - 0.03)	0/8	0.03 - 79.5	24/39	X		X
Calcium	688 - 3810	8/8	739 - 77300	39/39	X		
Chromium	12.1 - 20.8	8/8	15.4 - 7670	39/39	X		X
Cobalt	7.9 - 21.1	8/8	6.6 - 78.1	39/39	X		
Copper	8.1 - 38.6	8/8	20.9 - 9060	39/39	X		X
Iron	16000 - 36900	8/8	4350 - 460000	39/39	X	X	X
Lead	3.3 - 15.1	8/8	8 - 5510	39/39	X		X
Magnesium	1910 - 4970	8/8	1250 - 14000	39/39	X		
Manganese	220 - 579	8/8	35.4 - 2180	39/39	X		X
Mercury	0.025 - 0.033	2/8	0.015 - 10.3	37/39	X		
Nickel	13.6 - 38.4	8/8	25 - 3490	39/39	X		X
Potassium	652 - 2550	8/8	148 - 2620	39/39	X		
Selenium	1.2 - 2.2	8/8	0.91 - 15.9	39/39	X		
Silver	ND (0.07 - 0.08)	0/8	0.07 - 4.1	33/39	X		
Sodium	ND (25.2 - 45.6)	0/8	67.1 - 718	37/39	X		
Thallium	ND (0.45 - 0.52)	0/8	1.1 - 17.7	37/39	X		X
Vanadium	20.1 - 37.7	8/8	5.8 - 54.6	39/39	X		
Zinc	28.8 - 85.7	8/8	38.5 - 7610	39/39	X		

Notes:

ND = Not detected, analyte quantitation limit provided within parentheses.

Based on this comparison, all metals were detected in the background and Site soil samples with the following exceptions: cadmium, silver, sodium and thallium, and maximum concentrations in

the Site soil samples exceeded maximum concentrations in the background soil samples for all 23 metals analyzed. However, only antimony, cadmium, chromium, copper, lead, manganese, nickel, and thallium were detected at concentrations above the PRGs in Site soils alone, while arsenic and iron were detected at concentrations above the PRGs in both background and Site soil samples.

5.6.2 Groundwater Results

Volatile Organic Carbon (VOCs)

The only VOCs with reported concentrations greater than the Maximum Contaminant Levels (MCLs) include benzene and vinyl chloride. Benzene was reported at concentrations above the MCLs in the groundwater samples collected from monitoring well FR-MW-1 at concentrations of 24 $\mu\text{g/L}$, 19 $\mu\text{g/L}$, and 18 $\mu\text{g/L}$ during the October 2003, and April and December 2004 sampling events, respectively. Vinyl chloride was reported at a concentration of 5 $\mu\text{g/L}$ in the December 2004 groundwater samples collected from monitoring wells FR-MW-7 and FR-MW-9.

Pesticides

A low concentration of dieldrin (0.043 $\mu\text{g/L}$) detected in the April 2004 groundwater sample collected from monitoring well FR-MW-1 was the only pesticide detected in any of the groundwater samples. This compound was not detected when this well was sampled again in December 2004. There is no MCL established for dieldrin and no other pesticides were detected above the compound quantitation limits in the groundwater samples collected from the remaining nine monitoring wells.

PCBs

PCBs were detected at concentrations greater than the MCLs in groundwater samples collected from monitoring well FR-MW-1 during all three sampling events. PCBs were not detected above the compound quantitation limits in the groundwater samples collected from the remaining nine monitoring wells. Aroclor 1242 was reported at concentrations above the MCLs in groundwater samples collected from monitoring well FR-MW-1 (3 $\mu\text{g/L}$ in October 2003, 1.2 $\mu\text{g/L}$ in April 2004, and 81 $\mu\text{g/L}$ in December 2004). One LNAPL sample collected from monitoring well FR-MW-1 during the RI resulted in a total PCB concentration of 1,920 mg/kg and likely accounts for the PCB detections reported for groundwater samples collected from this well.

Metals

Groundwater samples collected from all 10 monitoring wells had detectable concentrations of total metals. Metals with reported concentrations greater than Primary MCLs include: antimony, barium, cadmium, lead, nickel, selenium, and thallium. Metals with reported concentrations greater than Secondary MCLs include: aluminum, iron, and manganese. These exceedances

occurred for at least one round of sampling. Table 2 below compares background exceedances of MCLs to Site exceedances of MCLs.

	Background Concentrations (MCL or Secondary MCL)		Site Concentrations (MCL)		Background Concentration (MCL or Secondary MCL)	Background Concentration (MCL or Secondary MCL)	Background Concentration (MCL or Secondary MCL)
	Range	Unit	Range	Unit			
Total (µg/L)							
Aluminum	386 - 22500	4%	37 - 13900	5/16		X	X
Antimony	3.7 - 5.3	2%	3.7 - 9.2	5/16	X		X
Arsenic	3.5 - 14.5	4%	10.1 - 36.1	10/16	X	X	X
Barium	15.2 - 112	6%	22.2 - 4150	16/16	X		X
Beryllium	0.28 - 2.3	3%	0.43 - 0.91	7/16			
Cadmium	0.53 - 1.7	2%	0.33 - 12	5/16	X		X
Calcium	45800 - 539000	6%	62200 - 240000	15/16			
Chromium	1.1 - 39.1	3%	1.8 - 14.5	11/16			
Cobalt	6.9 - 27.6	3%	2.8 - 8.6	9/16			
Copper	5.9 - 41.1	3%	1.6 - 56.6	5/16	X		
Iron	840 - 48900	4%	166 - 56400	14/16	X	X	X
Lead	2.5 - 9.7	2%	4.4 - 18	3/16	X		X
Magnesium	25600 - 654000	6%	33600 - 224000	16/16			
Manganese	33.2 - 796	6%	134 - 6070	16/16	X	X	X
Mercury	ND (0.037 - 0.055)	0%	ND (0.037 - 0.055)	0/16			
Nickel	10.6 - 60.7	3%	7 - 284	11/16	X		X
Potassium	11900 - 64600	6%	7270 - 134000	16/16	X		
Selenium	4.6 - 15.1	2%	4.2 - 126	7/16	X		X
Silver	ND (0.40 - 1.0)	0%	0.75	1/16	X		
Sodium	346000 - 1480000	6%	57600 - 504000	16/16			
Thallium	ND (2.8 - 4.0)	0%	4.4 - 11.7	4/16	X		X
Vanadium	0.92 - 60.2	4%	0.77 - 15	9/16			
Zinc	2.1 - 94.1	4%	3.5 - 341	11/16	X		
Dissolved (µg/L)							
Aluminum	299 - 679	2%	57.2 - 583	4/16		X	X
Antimony	6.2	1%	4 - 10	4/16	X	X	X
Arsenic	4.7 - 6.7	2%	5.2 - 40	9/16	X		X
Barium	15.6 - 38.9	6%	21.7 - 3840	16/16	X		X
Beryllium	0.42	1%	0.18 - 0.66	7/16	X		
Cadmium	ND (0.10 - 0.40)	0%	0.37 - 11.3	5/16	X		X
Calcium	45500 - 481000	6%	60300 - 243000	16/16			
Chromium	0.63 - 0.65	3%	0.31 - 7.7	12/16	X		
Cobalt	1.8 - 8.2	3%	0.8 - 8.4	12/16	X		
Copper	0.93 - 4.2	2%	1.3 - 48.6	4/16	X		
Iron	102 - 902	3%	169 - 59500	14/16	X	X	X
Lead	2.2	1%	1.7 - 4.2	3/16	X		
Magnesium	24500 - 600000	6%	32800 - 217000	16/16			
Manganese	35.3 - 469	5%	129 - 6030	16/16	X	X	X
Mercury	ND (0.037 - 0.055)	0%	ND (0.037 - 0.087)	0/16			
Nickel	4.3 - 11.2	3%	5.6 - 270	12/16	X		X
Potassium	11700 - 53800	6%	5700 - 135000	16/16	X		
Selenium	10.9	1%	4.8 - 120	4/16	X		X
Silver	ND (0.40 - 1.0)	0%	ND (0.4 - 1)	0/16			
Sodium	336000 - 1180000	6%	55200 - 511000	16/16			
Thallium	ND (2.8 - 4.0)	0%	3.4 - 12.4	2/16	X		X
Vanadium	0.75 - 1.7	3%	0.6 - 4.5	11/16	X		
Zinc	2.3 - 27.2	3%	2 - 319	11/16	X		

5.6.3 Leachate Results

Six potential seep locations were identified at the Site (USACE-A through USACE-F). Leachate samples were collected from five potential seep locations including: USACE-A, USACE-B, USACE-C, USACE-D, and USACE-F. USACE-E could not be collected due to minimal seepage, and close proximity of the seep to the Black River. All leachate samples collected from the five seep locations had detectable concentrations of total metals. Metals with reported concentrations greater than the MCLs or secondary MCLs include: aluminum, antimony, cadmium, iron, lead, manganese, nickel, and thallium. Metals which were also detected above

MCLs or secondary MCLs in the background groundwater samples from monitoring wells FR-MW-5 and FR-MW-6 include aluminum, iron, and manganese.

5.6.4 LNAPL Investigation and Results

Black stained sand with an oil sheen and evidence of waste was encountered at a depth of 8 feet below grade while advancing the original soil boring planned for monitoring well FR-MW-1 and the boring was abandoned. Monitoring well FR-MW-1 was installed approximately 40 feet to the northeast. Indications of a measurable thickness of LNAPL were observed on the top of the water column in monitoring well FR-MW-1 during preparations to sample this well on June 17, 2004. A sample of the LNAPL was collected from this monitoring well which is located near the northeastern corner of the Site. The thickness of LNAPL in the monitoring well was 0.04 feet at the time of sampling. Approximately 0.20 milliliters of LNAPL was recovered in the process of sampling, leaving a trace sheen in the well. When the well was gauged again the following week 0.01 feet of LNAPL was observed. A measurable thickness of LNAPL has not been observed in any of the other nine monitoring wells, nor did LNAPL reoccur in FR-MW-1 during the investigation. This would suggest that the observed LNAPL was localized and limited to a relatively small area around monitoring well FR-MW-1. The laboratory analytical results indicated that the LNAPL was composed primarily of motor oil (1,100,000 mg/kg) with a specific gravity of 0.96 grams per milliliter. Several VOCs were detected in the sample, including; 1,3- dichlorobenzene, ethylbenzene, isopropylbenzene, tetrachloroethene, and total xylenes. PCBs were also detected in the LNAPL sample, with concentrations of 1,600 mg/kg of Aroclor 1242 and 320 mg/kg for Aroclor 1252.

The area was further investigated and it was found that the soil staining was observed within a discontinuous sand layer at the base of a wedge of fill materials encountered immediately downgradient of the toe of the landfill slope. This wedge of fill material measured approximately 10 feet thick at the toe of the landfill slope and pinched out toward the edge of the river. Based on these observations, it was determined the area of impact associated with the LNAPL observed in FR-MW-1 was limited to a relatively confined area around and downgradient of this well. It also was determined that the discontinuous sand layer observed at the base of the fill has been acting as a preferential pathway for the migration of these contaminants. The supplemental site characterization activities also included an inspection of the river bank downgradient of the existing monitoring well FR-MW-1 to identify and document any indications of LNAPL discharge to the river (e.g., sheen, staining, and odor). This inspection included approximately a 500-foot section of the river bank extending from a point north of stream sampling location FR-SW-3 to a point south of stream sampling location FR-SW-5. The only evidence of LNAPL discharge to the river was the observation of a trace sheen emanating from a thin sandy layer of soil along a short section of the river bank downgradient of the LNAPL investigation area. This sandy soil layer observed along the river bank is likely directly connected to the sand layer in which the soil staining discussed above was observed to be preferentially migrating. A supplemental sediment sample (FR-SD-111004) was collected at this location. Based on the observations made during the supplemental soil boring, migration pathways of LNAPL may extend further south of sediment sample location FR-SD-111004 and

near seep location USACE-E, where sheens were observed at the edge of the river. Further assessment of the LNAPL migration pathway will be performed during the design phase of this project to completely delineate the area of contamination.

5.6.5 Sediment Investigation and Results

Eleven sediment samples (FR-SD-1 through FR-SD-10 and FR-SD-111004) were collected from the locations illustrated on Figure 2. One of these sampling points (FR-SD-10) is located up stream of the Site and two of these sampling points (FR-SD-1 and FR-SD-2) are located down stream of the Site. The remaining sampling points are distributed along the Site boundary. The sediment sample FR-SD-111004 was collected in connection with the supplemental site characterization to assess conditions along the river bank at a location identified as exhibiting a trace amount of sheen during the river bank inspection for the LNAPL investigation. The contaminants with concentrations reported above the U.S. EPA Region 5 RCRA Sediment Ecological Screening Levels (ESLs) and metals with concentrations above the Ohio Erie/Ontario Lake Plain (EOLP) Reference Values are reported below.

SVOCs

One or more SVOCs were detected at concentrations in excess of ESLs in four sediment sampling locations (FR-SD-6, FR-SD-8, FR-SD-9, and FR-SD-111004). SVOCs with reported concentrations greater than the ESLs include: 4-methylphenol, acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, bis(2-ethylhexyl)phthalate, dibenzo(a,h)anthracene, fluoranthene, fluorene, ideno(1,2,3-cd)pyrene, phenanthrene, and pyrene. This list of SVOCs is primarily composed of PAHs. Acenaphthene was reported at concentrations above the ESLs in sediment samples FR-SD-9 at 0.02 mg/kg and FR-SD-111004 at 0.13 mg/kg. Acenaphthylene was reported at a concentration above the ESLs in sediment sample FR-SD-9 at 0.011 mg/kg. Anthracene was reported at concentrations above the ESLs in sediment samples FR-SD-9 at 0.12 mg/kg and FR-SD-111004 at 0.48 mg/kg. Benzo(a)anthracene was reported at concentrations above the ESLs in sediment samples FR-SD-8 at 0.16 mg/kg, FR-SD-9 at 0.46 mg/kg, and FR-SD-111004 at 2.3 mg/kg. Benzo(a)pyrene was reported at concentrations above the ESLs in sediment samples FR-SD-8 at 0.2 mg/kg, FR-SD-9 at 0.44 mg/kg, and FR-SD-111004 at 2.7 mg/kg. Benzo(b)fluoranthene was reported at a concentration above the ESLs in sediment sample FR-SD-111004 at 4.5 mg/kg. Benzo(g,h,i)perylene was reported at concentrations above the ESLs in sediment samples FR-SD-8 at 0.2 mg/kg and FR-SD-9 at 0.3 mg/kg. Benzo(k)fluoranthene was reported at concentrations above the ESLs in sediment samples FR-SD-9 at 0.32 mg/kg and FR-SD-111004 at 2.9 mg/kg. Bis(2-ethylhexyl)phthalate was reported at a concentration above the ESLs in sediment sample FR-SD-111004 at 16 mg/kg. Dibenzo(a,h)anthracene was reported at concentrations above the ESLs in sediment samples FR-SD-8 at 0.062 mg/kg, FR-SD-9 at 0.11 mg/kg, and FR-SD-111004 at 0.7 mg/kg. Fluoranthene was reported at concentrations above the ESLs in sediment samples FR-SD-9 at 1.1 mg/kg and FR-SD-111004 at 3.5 mg/kg. Fluorene was reported at a concentration above the ESLs in sediment sample FR-SD-111004 at 0.27 mg/kg. Ideno(1,2,3-cd)pyrene was reported at

concentrations above the ESLs in sediment samples FR-SD-9 at 0.28 mg/kg and FR-SD-111004 at 1.2 mg/kg. Phenanthrene was reported at concentrations above the ESLs in sediment samples FR-SD-9 at 0.58 mg/kg and FR-SD-111004 at 2.1 mg/kg. Pyrene was reported at concentrations above the ESLs in sediment samples FR-SD-8 at 0.36 mg/kg, FR-SD-9 at 0.95 mg/kg, and FR-SD-111004 at 2.3 mg/kg.

The highest concentration of SVOCs exceeding ESLs were detected in sediment sample FR-SD-111004, collected immediately downgradient of the LNAPL investigation area. The presence of these PAH compounds are likely related to the motor oil based LNAPL observed to be preferentially migrating within a sand layer from the vicinity of FR-MW-1 upgradient of this location. All but one of the 13 SVOCs (4-methylphenol) detected at concentrations exceeding ESLs in sediment samples FR-SD-6, FR-SD-8, and FR-SD-9 have been detected in soil samples collected from nearby soil borings. However, only four of the 13 SVOCs detected above the ESLs in sediment (i.e.: benzo(a)anthracene, benzo(a)pyrene, benzo(k)fluoranthene, and dibenzo(a,h)anthracene) were reported at concentrations in soil above the PRGs.

PCBs

PCBs were detected in five of the 11 sediment samples analyzed. However, a concentration of 3.3 mg/kg of Aroclor 1254 in sediment sample FR-SD-111004 was the only detection above the ESLs. The presence of this PCB detection is also likely related to the PCB-contaminated motor oil LNAPL observed to be preferentially migrating within a sand layer from the vicinity of FR-MW-1 upgradient of this location.

Metals

Ten of the 11 sediment samples had one or more metals with reported concentrations greater than the ESLs and/or the ELOPs. The metals observed to exceed relevant criteria include: antimony, arsenic, barium, cadmium, chromium, cobalt, copper, lead, mercury, nickel, selenium, silver, thallium, vanadium, and zinc. However, six of these metals (arsenic, chromium, copper, lead, nickel, and zinc) were also observed to exceed criteria in the background sediment sample collected up stream of the Site. Antimony was reported at concentrations above the ELOPs in nine samples ranging from 1.6 mg/kg (FR-SD-5) to 12.5 mg/kg (FR-SD-111004). Arsenic was reported at concentrations above the ESLs and/or the ELOPs in nine sediment samples ranging from 9.8 mg/kg (FR-SD-4) to 36.1 mg/kg (FR-SD-111004). Barium was reported at a concentration above the ELOPs in sediment sample FR-SD-111004 at 295 mg/kg. Cadmium was reported at concentrations above the ESLs and/or the ELOPs in seven sediment samples ranging from 0.84 mg/kg (FR-SD-6) to 94.5 mg/kg (FR-SD-111004). Chromium was reported at concentrations above the ESLs and ELOPs in sediment samples FR-SD-3 at 49.3 mg/kg, FR-SD-10 at 54.2 mg/kg, and FR-SD-111004 at 424 mg/kg. Cobalt was reported at concentrations above the ELOPs in five sediment samples ranging from 12.2 mg/kg (FR-SD-8) to 23.6 mg/kg (FR-SD-111004). Copper was reported at concentrations above the ESLs and/or ELOPs in five sediment samples ranging from 31.9 mg/kg (FR-SD-9) to 445 mg/kg (FR-SD-111004). Lead was reported at concentrations above the ESLs and/or the ELOPs in sediment samples FR-SD-3 at 60.4

mg/kg, FR-SD-10 at 39 mg/kg, and FR-SD-111004 at 198 mg/kg. Mercury was reported at concentrations above the ELOPS in sediment sample FR-SD-3 at 0.147 mg/kg, and ESLs and ELOPS in sample FR-SD-111004 at 1 mg/kg. Nickel was reported at concentrations above the ESLs and/or ELOPs in nine sediment samples ranging from 23.6 mg/kg (FR-SD-6) to 374 mg/kg (FR-SD-111004). Selenium was reported at concentrations above the ELOPs in nine sediment samples ranging from 1.8 mg/kg (FR-SD-9) to 46.3 mg/kg (FR-SD-111004). Silver was reported at concentrations above the ESLs and ELOPS in sediment samples FR-SD-8 at 0.51 mg/kg and FR-SD-111004 at 3.2 mg/kg. Thallium was reported at concentrations above the ELOPs in sediment sample FRSD- 111004 at 9 mg/kg. Vanadium was reported at concentrations above the ELOPs in sediment sample FR-SD- 111004 at 56.9 mg/kg. Zinc was reported at concentrations above the ESLs and/or ELOPs in six sediment samples ranging from 123 mg/kg (FR-SD-6) to 715 mg/kg (FR-SD-111004).

5.6.6 Surface Water Investigation and Results

Two rounds of surface-water samples were collected to assess the potential for Site-related COPCs discharging into the Black River. The first round of surface-water samples was collected during December 2003 and the second round of surface-water samples was collected during May 2004. The results of these sampling events are summarized below. The following text summarizes analytes with concentrations reported above the U.S. EPA Region 5 RCRA ESLs for surface water, and the Ohio Outside Mixing Zone Average (OMZA) surface-water standards.

Metals

All 20 surface-water samples had concentrations of one or more total metals exceeding ESLs. Metals with reported concentrations greater than the ESLs include: cadmium, copper, lead, nickel, vanadium, and zinc. However, both copper and lead were also detected in the background surface water sample at concentrations exceeding ESLs. Cadmium was reported at concentrations above the ESLs in five surface-water samples ranging from 0.2 µg/L (FR-MW-4 and FR-SW-6 collected in December 2003) to 5.6 µg/L (FR-SW-7 collected in May 2004). Copper was reported at concentrations above the ESLs in all 20 surface-water samples ranging from 2.4 µg/L (FR-SW- 10 collected in December 2003) to 52.3 µg/L (FR-SW-7 collected in May 2004). Lead was reported at concentrations above the ESLs in eight surface-water samples ranging from 1.7 µg/L (FR-SW-10 collected May 2004) to 33.3 µg/L (FR-SW-7 collected May 2004). Nickel was reported at concentrations above the ESLs in surface-water samples FR-SW-7 (collected May 2004) at 38.1 µg/L and FR-SW-8 (collected May 2004) at 33.5 µg/L. Vanadium was reported at concentrations above the ESLs in surface-water samples FR-SW-7 (collected May 2004) at 27 µg/L and FR-SW-8 (collected May 2004) at 26.6 µg/L. Zinc was reported at concentrations above the ESLs in four surface-water samples ranging from 80.6 µg/L (FR-SW-5 collected May 2004) to 184 µg/L (FR-SW-4 collected May 2004).

6.0 Current and Potential Future Land and Resource Uses

For purposes of the human and ecological risk assessments for this Site, current and reasonably anticipated future land uses and current and potential beneficial groundwater uses were identified.

The Ford Road Landfill has no existing structures on the Site and has been inactive since the mid-1970s. A new residential development is located on the other side of the landfill, across Ford Road. This development began construction sometime around the late 1990s. The landfill itself is a vegetated cap and could be characterized as a greenway running along the Black River. The landfill is currently owned by the MetroParks and it is anticipated that the Site will be left as natural as possible after the remedy is implemented as requested by the owner. Institutional controls will be used, such as the placement of deed restrictions on the property to prevent intrusive actions and future development that potentially would increase human exposure, such as residential zoning, daycare facilities, or drinking-water wells.

To determine the current groundwater use at the Site, a search of water well logs at the Ohio DNR identified 10 potable water wells at properties located within a one mile radius of the Site, all installed between the mid-1950s and mid-1960s. Based on depth of installation, several of these wells appear to have been installed in the overburden with the rest of the wells completed in the underlying shale bedrock. The City of Elyria Water Department was contacted to determine if these wells were currently in use. The City's water records confirmed that the 10 residences associated with the potable wells are connected to the public water supply. In addition, the City of Elyria's Public Utilities and Water Departments reported that current City regulations allow for the use of groundwater as a potable water supply only when a well exists on a property at the time of purchase, and that a property owner may not install a potable water well within the City of Elyria. According to regulations, all new developments located within the City must connect to the City's water supply. This regulation, coupled with the fact that the properties associated with the 10 water wells identified within a one mile radius of the Site are already connected to the City water supply, ensure that groundwater is not and will not be used as a potable water source in the Site vicinity.

7.0 Summary of Site Risks

The Ford Road Group, with oversight by U.S. EPA and Ohio EPA, prepared a baseline human health risk assessment and an ecological risk assessment for the Ford Road Landfill, in order to evaluate potential risks to human health and the environment if no action is taken. This process characterizes current and future threats or risks to human health and the environment posed by contaminants at the Site. The risk assessment provides the basis for taking action and identifies the contaminants and exposure pathways that need to be addressed by the remedial action. This section of the ROD summarizes the results of the baseline human health risk assessment and the ecological risk assessment for the Site.

In accordance with U.S. EPA guidance on preparing RODs, the information presented here focuses on the information that is driving the need for the response action at the Ford Road Landfill and does not necessarily summarize the entire baseline human health or ecological risk

assessment. Further information is contained in the risk assessment within the RI, included in the Administrative Record for the Site.

7.1 Summary of Human Health Risk Assessment

The approach used in the Human Health Evaluation (HHE) relies on Tier I screening-level evaluations to identify media and exposure pathways that may pose unacceptable risks and more detailed (Tier II) baseline risk assessments may be considered if the Tier I screening-level evaluations identify potentially significant risks. The human health risk assessment evaluated the potential risks that could result to people from exposure to the contaminants at the Site. The human health risk assessment conducted at this Site used Risk Assessment Guidance for Superfund (RAGS) and other supplemental guidances to evaluate human health risks. The human health exposure assessment identified possible receptors and potentially completed pathways of exposure. The information is used in the HHE helped define Site-specific risk-based concentrations (RBCs).

7.1.1 Identification of Contaminants of Concern

A variety of contaminants including pesticides, PCBs, inorganics, VOCs and SVOCs, and media (soil, sediment, surface water, groundwater, and leachate) were sampled at the Site. To identify COPCs in these media, maximum chemical concentrations were compared to human health-based screening values. For soils, the COPC screening used the results from forty soil samples that were collected from the Site in 2003 and 2004. As a conservative assumption, both surface and subsurface soil samples were included in the analysis. Sediment data for preliminary COPC screening used the eleven samples that were collected from the Black River in 2003, and the results from a single sediment sample collected in 2004. Soil and sediment data were compared to PRGs for residential soil, while surface water and leachate data were compared to PRG for tap water and Ohio EPA Surface Water Quality Standards for human health (non-drinking-water standards for the Lake Erie drainage basin). Groundwater data was also compared to PRGs for tap water. Constituents with maximum detected concentrations that exceeded their associated screening values were retained as COPC. However, consistent with U.S. EPA RAGs, those constituents that were detected at a frequency of 5% or less (regardless of whether they exceeded their associated screening values) were eliminated as COPCs. Table 3 shows a list of each COPC related to each specific media for the Site.

7.1.2 Exposure Assessment

The risk assessment evaluated several exposure pathways for human to be exposed to COPCs within the Ford Road Landfill. An exposure pathway is a means by which a person may come in contact with site contaminants. The exposure assessment estimates the magnitude, frequency, duration, and routes of exposure to the COPCs at the site, and describes all assumptions, data and methods used to evaluate the potential for human exposure to the site contaminants. The exposure pathways evaluated were:

*Current Use Scenarios*Current Use Scenario

Currently, the landfill and adjacent areas are accessible to humans. Although the area does not serve as a formal public recreational area, people may access the Site for hiking and nature walks. However, there are no constructed or maintained trails, formal access points, or parking areas. Hunting in the area may also occur, although the proximity of homes and other public use areas limits the potential for hunters. However, for the development of the HHE for the Site, it is assumed that current and potential receptors are recreational users engaged in outdoor activities such as hiking, biking, or bird watching, and occasional maintenance workers (e.g., workers that maintain the landfill cover by periodic mowing). It is also assumed that recreational users of the Site may include children and adults. The follow include the exposure pathways identified in the current use scenario:

- One primary exposure pathway for human receptors is incidental ingestion of and dermal contact with soil at the Site. The exposure to COPCs in soil via the inhalation pathway is not expected to be significant, though, since soil COPCs consist primarily of inorganics, PCBs, and PAHs and the majority of Site soils are covered with vegetation, which mitigates the potential for generation of fugitive dust.
- Potential exposure to COPCs in groundwater is not expected to be significant since no active potable water wells are in use within a one-mile radius of the Site. This was confirmed by City of Elyria Water Department records which document that the 10 residences identified in a search of Ohio DNR water well logs had installed wells between the mid-1950s and mid-1960s but they are all currently connected to the public water supply. In addition, the depth to groundwater (2004 data range from 4.5 to 26 feet below ground surface) prevents exposure to COPCs in groundwater via direct contact. Also, several potential seep locations were identified onsite, but exposure to leachate is not expected to be significant due to the limited nature of these seeps coupled with the dense vegetation along the slopes of the landfill.
- The portion of the Black River adjacent to the Site may be used for recreational activities such as fishing, wading, and swimming. Therefore, recreational receptors (i.e., children and adults) may be exposed to sediment and surface water within the Black River via the incidental ingestion and dermal contact exposure pathways. However, the intermittent stream adjacent to the Site is relatively small and is only inundated during significant rainfall events, which precludes its use for recreational activities such as fishing, swimming, or wading. Therefore, surface water from the ditch adjacent to the Site is not expected to present significant exposure pathways. Due to the ephemeral nature of the intermittent stream, recreational receptors may be exposed to substrate (i.e., soil/sediment) within the stream channel.

- Consumption of contaminated fish from the Black River is a potentially complete exposure pathway. The observations of Site-related PCB concentrations in the sediment at the edge of the river indicate that the fish ingestion exposure pathway is potentially complete. PCBs are known to bioaccumulate in fish, and have been identified as a COPC for sediment.

Future Use Scenarios

Future Use Scenario

In terms of future land use, the property may be included as part of an environmental greenspace, and will likely be left in a natural or semi-natural condition. Future residential use of the Site and groundwater withdrawal will be restricted by institutional controls. For the purposes of the HHE, future land use at the Site is anticipated to be recreational. Potential future recreational development of the Site may include walking or biking trails. However, no recreational facilities such as playgrounds or campgrounds are planned for construction at the Site, as they may compromise the landfill cap. Under these land-use scenarios, current and potential receptors are recreational users engaged in outdoor activities such as hiking, biking, or bird watching, and occasional maintenance workers (e.g., workers that maintain the landfill cover by periodic mowing). Again, it is assumed that recreational users of the Site may include children and adults.

7.1.3 Toxicity Assessment

The exposure parameters used to develop the Site-specific RBCs include standard U.S. EPA reasonable maximum exposure (RME) default (e.g., exposure duration, soil ingestion) and Site-specific values (e.g., exposure frequency). Target risk levels used to calculate RBCs include a hazard quotient of 0.1 for non-carcinogens, and an incremental cancer risk of one-in-one-million (1×10^{-6}) for carcinogens. The RBCs were calculated using slope factors (SFs) and reference doses from the U.S. EPA Integrated Risk Information System (IRIS) on-line database and other sources, as appropriate. Arsenic, Aroclor 1242, and Aroclor 1254 have both cancer and non-cancer toxicity values, therefore, the most conservative RBC values for soil and sediment were selected for these COPCs. Tables 4, 5, 6 and 7 illustrate the development of the RBCs for both soil and sediment.

After the screening process, it was determined that the primary risk-driving chemicals of concern at the site include lead, PAHs and PCBs. The main target for lead toxicity is the central nervous system. Higher levels of lead exposure can also damage the brain and kidneys. Lower levels of lead exposure in children can adversely affect mental and physical growth. Several PAHs, including benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, and dibenz(a,h)anthracene are considered by U.S. EPA to be Group B2, probable human carcinogens. Noncancer adverse health effects include damage to the reproductive system, skin, and immune system. PCBs are considered to be Group B2, probable human carcinogens. Noncancer adverse health effects from exposure to PCBs include reduced birth

weight, problems with motor skills, reduced short-term memory, acne-like skin conditions, and damage to the immune system, liver, stomach and thyroid gland.

7.1.4 Risk Characterization

U.S. EPA's risk guidance identifies a target cancer risk range of 10^{-4} to 10^{-6} (1 in 10,000 to 1 in a million) excess cancer risk for Superfund sites. If site contamination poses a risk of less than 10^{-6} , there is generally no need for action. Cancer risks greater than 10^{-4} generally require action to reduce and/or abate the risk, and cancer risks between 10^{-4} and 10^{-6} present a potential cause for remedial action. U.S. EPA's guidance also indicates that a non-cancer hazard index exceeding 1.0 generally is a cause for action to reduce and/or abate the potential non-cancer risks associated with site contamination, while a hazard index less than 1.0 generally does not require action.

Outdoor workers (i.e., maintenance workers) may be exposed to shallow subsurface soil, which is defined as 0 to 2 feet below ground surface. Maintenance workers and recreational users of the Site are not expected to be involved in any intrusive activities (e.g., soil excavation) that would expose them to subsurface soils at the Site. Therefore, although COPCs were identified using surface and subsurface soil data, only surface soil data (<2 feet bgs) are compared to Site-specific soil RBCs.

Benzo(a)pyrene exceeds the Site- soil RBC in seven of the 19 surface soil samples (FR-HB2-S1, FR-HB3-S1, FR-HB5-S1, FR-HB6-S1, FR-HB9-S1, FR-HB12-S1, and FR-SB-34-S1), and dibenzo(a,h)anthracene exceeds the Site-specific soil RBC in two samples (FR-HB2-S1, FR-HB9-S1). For PCBs, only three of the 19 surface soil samples (FR-HB4-S1, FR-HB9-S1, and FR-HB10-S1) exceed the Site-specific soil RBC. Sample FR-HB4-S1 is located along the south slope of the landfill, and samples FR-HB9-S1 and FR-HB10-S1 are located along the north slope of the landfill. Antimony, chromium, and thallium concentrations exceed the Site-specific RBC in several of the surface soil samples located along the north and south slopes of the landfill. Cadmium exceeds the RBC in only one sample (FR-HB4-S1). Nickel exceeds the RBC in one sample (FR-HB6-S1) along the south slope of the landfill, and in two samples (FR-HB9-S1 and FR-HB11-S1) along the north slope of the landfill. Lead exceeds the PRG (400 mg/kg) in six of the 19 surface soil samples. Arsenic and iron concentrations in each of the 19 surface soil samples collected along the north and south slopes of the landfill exceed the Site-specific soil RBC. It should be noted that Site-specific background concentrations of arsenic and iron also exceed the Site specific RBC and/or PRGs for residential soil (arsenic exceeds the PRG and Site-specific RBC in all 10 background samples; iron exceeds the PRG in eight of the 10 background samples and exceeds the RBC in all 10 background samples). The presence of these metals at elevated concentrations in the background soil samples indicates that concentrations of certain metals may not be Site-related and that these metals may simply have higher background concentrations.

Benzo(a)pyrene exceeds the Site-specific sediment RBC in only two of the 11 sediment samples (FR-SD-9 and FR-SD-111004). Likewise, benzo(b)fluoranthene, dibenz(a,h)anthracene, PCBs (Aroclor 1254), cadmium, chromium, and thallium concentrations only exceed the Site-specific

sediment RBC in one of the 11 sediment samples (FR-SD-111004). Iron concentrations exceed the Site-specific sediment RBC in three of the 11 sediment samples. Arsenic concentrations in each of the 11 sediment samples exceed the sediment RBC. However, elevated concentration of arsenic in the sediment sample collected upstream of the Site (FR-SD-10) indicates that arsenic may not be Site-related.

Uncertainty of any risk characterization will be added by OEPA Risk Assessor during review.

It was determined that exposure to any leachate is not expected to be significant, due to the limited nature of the seeps and the dense vegetation in these areas of the Site.

In summary, regarding the COPCs at the Site:

- For soil and sediment, the COPCs are PAHs, PCBs, and metals.
- For surface water the COPCs are one SVOC (bis[2-ethylhexyl]phthalate) and five metals (aluminum, antimony, arsenic, iron, and thallium).
- For groundwater, the COPCs are two VOCs (benzene and vinyl chloride), one SVOC (bis[2-ethylhexyl]phthalate), PCBs, and several metals.
- For leachate, the COPCs are two VOCs (benzene and chloroform), one SVOC (bis[2-ethylhexyl]phthalate), three pesticides (beta-BHC, dieldrin, and heptachlor), and several metals.

The conservatism of the Tier I screening-level approach is indicated by the fact that background soil concentrations of arsenic and iron (and the upstream sediment concentration of arsenic) also exceeds the risk-based values.

- Most of the COPC that have been identified are inorganics, PAHs and PCBs.
- Most COPC were identified in onsite soil and/or groundwater, with relatively fewer COPC identified for sediment, surface water, and leachate.
- Potential human exposure pathways associated with the Site include direct contact and incidental ingestion of soil, inhalation of fugitive dust, and dermal contact and incidental ingestion of sediment and surface water in the Black River. Human consumption of contaminated fish from the Black River is also a potentially complete exposure pathway.
- PCBs were also identified as a COPC for sediment, but only one sample (FR-SD-111004 = 3.3 mg/kg) had PCB concentrations above 1 mg/kg. However, a sandy soil layer containing an oily sheen was observed along the river bank at this sampling location. In addition, sample FR-SD-111004 is located downgradient from monitoring well FR-MW-1, which had a measurable thickness of an oil LNAPL with elevated concentrations of

Aroclors 1242 and 1254. The sheen area does not appear to have led to widespread PCB contamination in the Black River, as indicated by the fact that PCBs were not detected in sediment samples collected downstream at FR-SD-1 and FR-SD-2. This area will be further delineated during the Remedial Design.

- COPC concentrations of two PAHs (benzo[a]pyrene and dibenz[a,h]anthracene) and several metals (and PCBs for two samples) exceed the Site-specific soil RBCs. However, the presence of metals (i.e., arsenic and iron) in background soil samples at concentrations exceeding the Site-specific soil RBCs and/or the PRGs for residential soil indicates that these constituents may not be Site-related.
- Lead concentrations in six of the 19 surface soil samples exceed the PRG (400 mg/kg).
- COPC concentrations of benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, and PCBs (Aroclor 1254) exceed the Site specific sediment RBC in one sediment sample (FR-SD-111004); benzo(a)pyrene also exceeds the Site-specific RBC in sediment sample FR-SD-9. Metal concentrations (i.e., arsenic, cadmium, chromium, iron, and thallium) in sample FR-SD-111004 also exceeded their associated Site-specific sediment RBCs. Arsenic concentrations in each of the 11 sediment samples (including the sediment sample collected upstream of the Site) exceed the Site-specific sediment RBC. The presence of arsenic in the upstream sediment sample may indicate that arsenic is not Site-related.

7.2 Summary of Ecological Risk Assessment

The ecological risk assessment considers those chemicals that were detected in surface water, sediment, and/or surface soils. The assessment incorporates both measured and modeled estimates of exposure, the available guidance and published information on the environmental fate and toxicities of the chemicals evaluated, and the expected/known habitats and likely species in the area. More detailed information can be found in the RI/FS.

7.2.1. Site Characterization

The Site is bordered by an intermittent stream and sewer main to the north, a ravine and rural land to the south, the Black River to the east, and Ford Road to the west. Cover type for the Site and surrounding area was identified by the dominant vegetative species and classification of similar areas into ecological communities. The landfill and immediate surrounding area is a mixture of field, scrub shrub, floodplain forest, and upland forest habitat cover types as described below.

Field – Most of the existing landfill cover is classified as field cover type. Field cover type consists of low herbaceous vegetation including forbs and grasses. This cover type is typically inhabited by passerine birds and small mammals (e.g. mice, shrew). Larger mammals (e.g. deer, red fox) and reptiles (e.g. snakes) may also use the area for foraging.

Scrub-Shrub – Scrub-shrub habitat is located along the slope of the landfill and on the west side of Ford Road. The scrub-shrub plant community includes deciduous shrubs, herbaceous vegetation (e.g., grasses), and saplings. This cover type is typically used for foraging, nesting, and cover by various terrestrial species.

Upland Forest – Upland forest habitat is located along the northern and southern boundary of the landfill. The upland forest cover type includes mature trees, which are predominantly hardwoods (e.g., black cherry, white ash, white oak, red oak), and understory vegetation such as grasses, shrubs, and other species. The upland forest cover type provides habitat to arboreal mammals (e.g., raccoon, squirrel), and passerine birds may use the forest borders as edge habitat for nesting, breeding, shelter, and feeding. Wildlife may also forage on mastproducing trees (e.g., oaks).

Floodplain Forest – Floodplain forest is a lowland hardwood forest community found along rivers. The floodplain forest cover type is located east of the landfill between the upland forest and the Black River Floodplain forests provide suitable habitat for both semi-aquatic and terrestrial fauna due to fluctuating water levels and nutrient-rich soils. Terrestrial species (e.g., raccoon, squirrel) may use this cover type for nesting, breeding, shelter, and feeding. Several types of bird species (e.g. songbirds, waterfowl, and occasional raptors), amphibians (e.g. frogs), reptiles (e.g. turtles), and large mammals (e.g. deer) may also use this cover type.

Black River – Fish and wildlife resources may also be associated with the Black River east of the Site. The river provides suitable habitat for reptiles/amphibians, benthic invertebrates, and fish. Birds and mammals from surrounding habitat may use the river as a drinking-water source and/or a source of food. Evidence of beaver use was observed near sample locations FR-MW-2 and FR-MW-3.

The Site is located within the Black River Reservation which is part of the Lorain County Metro Park District, and follows the Black River as it meanders from Elyria to Lorain. This natural area includes unique habitat types (e.g., shale cliffs, wetlands, a remnant prairie), and a 3.5-mile all-purpose trail located approximately a mile downstream of the Site. The Cascade-Elywood Park is located along the Black River, approximately 2 miles upstream of the landfill. Three potentially threatened plant species have been recorded along the Black River downstream of the Site. These species are butternut, round-leaved dogwood, and Canada buffalo-berry.

Information from the U.S. Fish and Wildlife Service indicates that the Site is within the range of four federally listed threatened or endangered species, including one mammal, the Indiana bat, two species of birds, the bald eagle and piping plover, and a snake species (eastern massasauga). USFWS records, however, indicate that the nearest eagle nest is 2.5 miles northeast of the Site, that no piping plover habitat occurs onsite, and it is unlikely that the massasauga habitat is present. The habitat of the Indiana bat generally consists of caves during the winter months, and man-made structures and possibly hollow trees during the summer months (Burt and

Grossenheider, 1980). The Indiana bat may utilize wooded habitats in the vicinity of the Site, but is not expected to utilize Site resources because the landfill has very few mature trees.

7.2.2 Ecological Toxicity Assessment

The purpose of the ecological toxicity assessment is to identify ecological screening criteria for each COPC. These screening criteria are similar to those values that were used for the COPC identification, except that they represent estimates of concentrations above which ecological effects may occur, and may be less conservative than the COPC screening values. Regardless, these screening criteria are still conservative and do not necessarily provide a quantitative estimate of risk.

The soil screening values that were used to evaluate COPC concentrations are the U.S. EPA ecological soil screening levels (Eco-SSLs). Eco-SSLs are concentrations that are protective of ecological receptors that commonly come into contact with soil or ingest biota that live in or on soil, and should be used during the screening-level risk calculation. Similar soil-screening values from Oak Ridge National Laboratory are also used to screen soils, and are used for instances where U.S. EPA Eco-SSLs are not available. For sediment, the screening values that are used to evaluate COPC concentrations were the consensus-based sediment quality guidelines developed by MacDonald et al. These values include threshold effect concentrations (TECs) and probable effect concentrations (PECs). TECs are intended to identify concentrations below which harmful effects on sediment-dwelling organisms are not expected, and PECs identify concentrations above which harmful effects on sediment-dwelling organisms are expected to occur frequently (MacDonald et al., 2000). For surface water and leachate, screening values are the Ohio EPA Water Quality Standards for Aquatic Life (OAC 3745-1-07). These values were also used in the COPC screening step.

7.2.3 Ecological Risk Characterization

The ecological risk characterization is similar to the COPC screening in that it is based on a comparison of detected concentrations to screening criteria. In general, ecological risk-based screening values are not available for organics. However, the single detected concentration of dieldrin (FR-HB2-SI = 0.0025 mg/kg) exceeds the Eco-SSLs. For inorganics, soil COPC concentrations frequently exceed the screening values. Despite the fact that background concentrations frequently exceed the screening values, onsite soil concentrations for several COPC are higher than background. Given the frequency of the screening value exceedances in onsite samples, potential ecological risks associated with soil exposure cannot be discounted.

For organics, two of the sediment samples (FR-SD-8 and FR-SD-9) exhibit concentrations that are between the TEC and PEC values. For one sample (FR-SD-111004), SVOC concentrations often exceed both the TEC and the PEC. Metals concentrations for most sediment samples rarely exceed the PEC values. An exception is sample FR-SD-111004, which exceeds the PEC for several metals. Based on this evaluation, potential ecological risks for sediment are largely associated with sediment in the vicinity of FR-SD-111004.

Surface-water data were compared to the Ohio EPA Water Quality Standards for Aquatic Life (Outside Mixing Zone Average [OMZA] and Inside Mixing Zone Maximum [IMZM]). All of the 2003 surface-water data (both total and dissolved) are below the OEPA standards. For 2004, several samples exceed OMZA water-quality standards for one or more COPC. However, the magnitude of exceedance is less than one order of magnitude, and these concentrations are less than IMZM water quality standards. Given the lack of widespread significant exceedance of surface-water standards, the relative risks associated with potential surface-water exposure is expected to be low.

Leachate data were compared to the Ohio EPA Water Quality Standards for Aquatic Life (OMZA and IMZM). Several of the leachate samples have COPC concentrations (both total and dissolved) greater than the Ohio EPA OMZA standards. However, the majority of these concentrations are less than the IMZM standards (copper was the only constituent to exceed IMZM standards; these exceedances are for total recoverable copper in two leachate samples from location USACE-F), and the relative risks associated with potential leachate exposure are expected to be low. First, exceedances of the OMZA standards are less than one order of magnitude. Second, the seeps are ephemeral in nature and do not represent suitable habitat for most aquatic receptors.

Any uncertainties of risk characterization will be added by OEPA Risk Assessor during review

7.2.4 Ecological Risk Conclusions

For the screening-level ERA, the COPCs identified for the Site include PAHs, PCBs/pesticides, and inorganics for soil, sediment, surface water, and leachate. The highest potential ecological risks associated with the Site are likely to be in association with elevated metals in the soils around the slope of the landfill. Potential risks associated with leachate, surface water, and sediment are expected to be relatively low, with the exception of sediment in the vicinity of sample FR-SD-111004 and this will be addressed under the planned remedy.

8.0 Remedial Action Objectives and ARARs

8.1 Remedial Action Objectives (RAOs)

RAOs are developed as medium-specific goals or objectives for the protection of human health and the environment. RAOs for the Site are based on the results of the screening-level risk assessments, applicable rules and regulations, discussions with and input from the U.S. EPA, Ohio EPA and the Ford Road Group, and other Site-specific goals. Site RAOs are as follows:

- Minimize the potential for direct contact exposures of human and ecological receptors to COPCs in Site soils;

- Reduce potential risks to human health and the environment associated with Site soils, sediment, groundwater, and surface water; and
- Reduce the possibility for COPC transport and/or migration.

To achieve these remedial objectives a remedial alternative should accomplish the following goals:

- Mitigate the potential for direct contact, incidental ingestion and fugitive dust exposures of recreational receptors (i.e., adults and children) to surface soils along the landfill slope with constituent concentrations exceeding Site-specific soil RBCs;
- Mitigate risk to humans related to the fish ingestion exposure pathway by eliminating potential future contributions of PCBs to the Black River from the Site;
- Mitigate the potential for dermal contact and incidental ingestion exposures of recreational receptors (i.e., adults and children) to the localized sediments along the edge of the Black River downgradient of the LNAPL investigation area with constituent concentrations exceeding the Site-specific sediment RBCs;
- Mitigate the potential for dermal contact and incidental ingestion exposures to ephemeral leachate seeps with constituent concentrations exceeding the Site-specific RBCs; and
- Mitigate the potential for direct contact, incidental ingestion, and food chain exposures of ecological receptors to COPCs in surface soils, sediments, and surface water.

8.2 Applicable or Relevant and Appropriate Requirements (ARARs)

CERCLA, as amended by SARA, specifies that Superfund remedial actions must comply with the substantive requirements of federal and state environmental laws. Such requirements may be ARARs. In addition to ARARs, federal and state advisories and guidance documents exist that, although not binding regulations, contain information "to be considered" (TBC). ARARs and TBCs are important in developing remedial objectives that comply with regulatory requirements or guidance (as appropriate). The identification of site-specific ARARs is based on specific constituents at a site, the various response actions proposed, and the general site characteristics. As such, ARARs are classified into three general categories:

- **Chemical-Specific ARARs** – specific to the type(s) of constituents, pollutants, or hazardous substances at a site; include state and federal requirements that regulate contaminant levels in various media;
- **Action-Specific ARARs** – specific to the cleanup activities being considered; usually technology- or activity-based; regulatory requirements that define acceptable excavation, treatment, and disposal procedures; and

- **Location-Specific ARARs** – specific to actions at the geographic location; requirements for contaminant concentrations or remedial activities resulting from a site's physical location (e.g., wetlands or floodplains).

Potentially applicable federal and state ARARs and TBCs are summarized in 8A-8C.

9.0 Description of Alternatives

Following development of the RAOs, a screening and evaluation of potential remedial alternatives was conducted in accordance with CERCLA and the NCP in the FS Report.

To support the development of potential remedial alternatives used to achieve the RAOs several General Response Actions were identified. The General Response Actions are typically media-specific technology types that may be used to satisfy one or more of the RAOs. For the Site, the General Response Actions are grouped into nine broad categories:

1. No Further Action: This includes no new or additional remedial activities or technologies and serves as a baseline for comparing the overall effectiveness of other remedial technologies.
2. Institutional Controls: Institutional controls generally consist of nonintrusive legal and/or administrative controls that reduce potential exposure to impacted materials and/or mitigate the potential for jeopardizing the integrity of the selected remedy (e.g., an engineered cap).
3. Monitoring: Monitoring activities include periodic collection of field samples (e.g., soil, sediment, leachate, and/or groundwater) and/or performing visual reconnaissance to monitor changes or improvements in Site conditions and any associated remedy.
4. Engineering Controls: Engineering Controls include techniques to reduce erosion along the perimeter of the existing surface cover and reduce the transport of COPCs.
5. Removal: Removal consists of excavation of select areas outside of the landfill proper to remove soils that may pose a potential risk.
6. In Situ Containment: *In situ* containment generally consists of enhancing the existing surface cover by placing additional low-permeability material in thin or eroded sections over the subject area.
7. Groundwater/Leachate Collection and Treatment: Groundwater/leachate collection and treatment generally involves extracting groundwater/leachate out of the ground and subsequently treating the extracted water onsite or at an approved offsite facility.
8. Hydraulic Modifications: Hydraulic modifications generally involve groundwater extraction and/or reinjection to modify hydraulic conditions and minimize the potential for migration of affected groundwater/ leachate. Depending on the specific extraction location, extracted groundwater may require treatment prior to discharge or reinjection.
9. In Situ Groundwater/Leachate Treatment: *In situ* groundwater/leachate treatment generally involves installing impermeable walls ("funnels") and permeable "gates" in the shallow subsurface perpendicular to groundwater flow or other applicable methods that

could be identified as part of design. The funnels direct the shallow groundwater through the gates. The gates comprise treatment media material that will react with the impacted groundwater to reduce COPC concentrations. Barrier treatment walls consisting entirely of treatment media are a viable alternative to a funnel and gate system.

General Response Actions retained after a screening process were combined to develop two sets of potential remedial alternatives: one for the portion of the Site within the limits of the landfill, including cascaded waste on the side slopes, and one for the area of interest outside of the landfill limits.

Remedial Alternatives: Within the Landfill Limits

- Alternative 1 – No Further Action
- Alternative 2 – Monitoring and Institutional Controls
- Alternative 3 – In-Situ Containment with Surface Cover Enhancement
- Alternative 4 – Groundwater/Leachate Control:
 - Alternative 4a – In-Situ Barrier Treatment Wall.
 - Alternative 4b – Pump and Treat.

Remedial Alternatives: Outside the Landfill Limits

- Alternative A – Select Removal of Specifically Identified Areas Outside of Landfill Limits
- Alternative B – In-Situ Containment by Extension of Existing Surface Cover Outside of Landfill Limits

The Remedial Alternatives that are specific to the areas outside of the landfill limits are not “stand alone” remedial options. These two choices were included as a possibility to use in conjunction with the first four alternatives.

9.1 Description of Remedy Components

Each of the alternatives is briefly described below. More detailed information about each of the alternatives can be found in the FS Report, which is included in the Administrative Record for the Site.

Alternative 1: No Further Action

(1) *Description of Alternative:* Under this alternative, no further remediation would occur at Ford Road Landfill. No monitoring would be conducted to assess the overall condition of the landfill over time. Naturally-occurring processes would occur on their own, over time. No institutional controls would be put in place. Evaluation of the No Action or No Further Action alternative is required by the NCP and provides a baseline against which the other potential remedial alternatives are evaluated.

(2) *Treatment Technologies and Materials they will Address:* There would not be treatment of any materials under this alternative.

(3) *Containment Component:* There is no containment component associated with this remedy.

(4) *Costs:* The only costs associated with this alternative would be for annual site inspections over a 15-year period. The total estimated cost is approximately \$46,000 and is provided in 2006 dollars.

Alternative B: Monitoring, Natural Attenuation and Institutional Controls

(1) *Description of Alternative:* This alternative would be limited to the performance of long-term monitoring activities and the application of relevant institutional controls. The monitoring program would involve regular Site inspections, groundwater sampling and other Site monitoring activities. Natural attenuation involves various naturally occurring processes by which constituents are degraded or attenuated. Institutional controls generally consist of nonintrusive legal and/or administrative controls that reduce potential exposure to impacted materials and/or to mitigate the potential for jeopardizing the integrity of the selected remedy. Typical institutional controls involve the placement of deed restrictions on the property to prevent intrusive actions and future development that potentially would increase human exposure, such as residential zoning, daycare facilities, or drinking-water wells. Installation of a fence around the perimeter of the landfill, including the areas of cascaded waste would be considered.

(2) *Treatment Technologies and Materials they will Address:* The only treatment that would be occurring under this alternative is associated with natural attenuation.

(3) *Containment Component:* There is no containment component associated with this remedy.

(4) *Costs:* The costs assume implementation of deed restrictions and installation of a Site perimeter fence. The total costs of this alternative are estimated to be \$624,000. The Operation and Maintenance (O&M) costs assume annual visual inspections of the Site for 15 years and sampling activities for 15 years. The total estimated cost is provided in 2006 dollars.

Alternative 3: In Situ Containment with Surface Cover Enhancement

(1) *Description of Alternative:*

- This alternative would involve implementing the measures outlined under Alternative 2 (e.g., monitoring and institutional controls) in conjunction with the enhancement of the existing surface cover over the landfill, as appropriate.
- The enhancement of the landfill cover would involve Site grading to improve surface water control and the placement of additional low-permeability material over those areas

of the landfill that do not currently meet the requirement that a minimum 2-foot cover exists over the subject area.

- Cascaded waste was encountered over an approximately 5,000 square foot area on the north slope of the landfill and an approximately 15,000 square foot area on the south slope of the landfill, both outside the limits of waste. Alternative 3 will address this waste by consolidation within the existing or extended limits of the landfill or disposal at a licensed facility, if necessary. It was assumed that a limited amount of the material will require offsite disposal and most of the material will be consolidated within the limits of the landfill. Material consolidated within the limits of waste will be placed in lifts and compacted in areas on the top of the landfill after the existing cover has been stripped for reuse. Surficial wastes will be removed to native material, unless the underlying material exceeds regulatory limits. Backfill would only be expected to be placed in these areas, as required, to result in appropriate stable slopes beyond the limits of the landfill, depending on the final grade.
- The possibility of slope modifications will also be addressed under Alternative 3. Currently, most areas of the landfill have side slopes in the range of 1.25-1.5:1 horizontal:vertical ratio and are not imminently unstable. The proposed modifications to the existing cap, though, may affect the stability of the side slopes. It is assumed that the northern slope, southern slope, the northern portion of the eastern side slope, and approximately half of the southern portion of the eastern side slope (approximately 73,000 square feet, total) may require stabilization. Should it be found during the Remedial Design that further modifications are required to maintain slope stability during and after cap modifications, possible response actions could include laying back the side slopes from the existing toe, extending the existing toe with appropriate adjustment of the side slopes, or adding a structural enhancement at the existing toe then adjusting the side slopes from the top of the structure.
- Upon completion of the cover enhancements and other components of Alternative 3, the presence of a continuous 2-foot cover over the entire landfill surface would serve to mitigate potential exposure to impacted media and migration of COPCs by reducing the volume of precipitation that infiltrates through the landfill.

(2) *Treatment Technologies and Materials they will Address:* There are no treatment technologies associated with this remedy.

(3) *Containment Component:* This alternative can be largely categorized as a containment remedy. Most of the cascaded debris found on the side slopes of the landfill would be placed back into the existing landfill, and the landfill as a whole would be re-graded and capped appropriately. The landfill cap would meet the 1976 capping requirements (Ohio EPA ARAR) and all other federal and state requirements.

(4) *Costs*: The costs assume inclusion of the work items in Alternative 2 as well as placement of two feet of clay and a geotextile layer over the northern and southern side slopes (approximately 8,100 square yards), assuming that 50% of the cover material required will be imported. The costs also assume that approximately 250,000 cubic yards of material could be affected by slope modifications to a 3:1 slope and 1,500 cubic yards of cascaded waste will be relocated. The O&M costs assume annual visual inspections of the Site for 15 years and sampling activities for 15 years. The total costs associated with implementing Alternative 3 are estimated to be \$3,367,000. The total estimated cost is provided in 2006 dollars.

Alternative 4a – Groundwater/Leachate Control – In Situ Barrier Treatment Wall

(1) Description of Alternative:

- This technology would involve implementing all of the components discussed in connection with Alternative 3 in conjunction with installing a downgradient in situ permeable barrier treatment wall to intercept groundwater in order to react with and mitigate COPCs in groundwater. This alternative assumes that the treatment wall would be approximately 220 feet long, 4 feet wide, and 15 feet deep and would be located to intercept groundwater flow beyond the toe of the landfill slope from along the Black River.
- The assumed treatment media selected for this comparison is granular activated carbon. The selection of granular activated carbon was based on its versatility to address a variety of COPCs and because it is the most commonly used treatment media

(2) *Treatment Technologies and Materials they will Address*: The remedy would involve the use of granular activated carbon to treat contaminated groundwater flowing from the landfill and into the Black River. The installation of this technology could reduce the potential for migration of COPCs in groundwater and reduce their toxicity.

(3) *Containment Component*: This alternative has the same containment component that Alternative 3 would include since it involves implementing everything dictated under Alternative 3, as well as a barrier treatment wall.

(4) *Costs*: The total capital cost to implement this alternative is estimated to be \$2,271,600. Including indirect costs associated with institutional controls and a present worth analysis of O&M costs (total estimated cost of \$1,593,500 per year for 15 years), the total 15-year present worth cost associated with implementing Alternative 4a is estimated to be \$4,916,000. The O&M costs assume annual visual inspections of the Site for 15 years and sampling activities for 15 years. Replacement of the granular activated carbon is expected once every three years for the first 15 years and once every five years for the final 15 years. It is assumed that the overlying backfill material will be reused. The total estimated cost is provided in 2006 dollars.

Alternative 4b – Groundwater/Leachate Control – Pump and Treat

(1) Description of Alternative:

- This technology would also involve implementing all of the components discussed in connection with Alternative 3 in conjunction with groundwater/leachate collection and treatment. The additional component of this alternative involves extracting groundwater/leachate out of the ground (e.g., using trenches or wells) and subsequent treatment of extracted water to address COPCs in groundwater. Collected water would be transported offsite for treatment. This alternative assumes that the recovery trench would be approximately 220 feet long, 4 feet wide, and 15 feet deep and would be located to intercept groundwater flow beyond the toe of the landfill slope along the Black River.

(2) Treatment Technologies and Materials they will Address: This option is very similar to Alternative 4a, but instead of a treatment wall, this option would install a pumping and treating system in a similar location. This pump and treat would capture any contaminated groundwater leaving the landfill and treat this contaminated groundwater before releasing it.

(3) Containment Component: This alternative has the same containment component that Alternative 3 would include since it involves implementing everything dictated under Alternative 3, as well as a pump and treat system.

(4) Costs: The costs assume inclusion of the work items in Alternative 3 as well as construction of a 220-foot long, 4-foot wide, and 15-foot deep trench. The excavation is assumed to be filled with 65% stone fill and 35% backfill. It is assumed that, for excavated materials, most of the material will be placed under the final landfill cover and a minimal amount will need to be disposed of at an appropriate, offsite facility. The total capital cost to implement this alternative is estimated to be \$2,148,700. Including indirect costs associated with institutional controls and a present worth analysis of O&M costs (total estimated cost of \$8,005,100 for 15 years), the total 15-year present worth cost associated with implementing Alternative 4b is estimated to be \$11,150,000. The O&M costs assume annual visual inspections of the Site for 15 years and sampling activities for 15 years. Pump replacement is expected once every five years, and treatment of 5,466,000 gallons of water is assumed annually. The total estimated cost is provided in 2006 dollars.

Alternative A – Select Removal of Specifically Identified Areas Outside of Landfill Limits

(1) Description of Alternative:

This alternative would involve the removal of selected soil/sediment observed to contain COPCs that exceed Site-specific RBCs outside of the landfill limits in the northeast corner of the Site. The removal depth is assumed to be approximately four feet. The focus of this excavation would begin at the location along the edge of the river where evidence of LNAPL migration was observed (e.g., the thin sand unit exhibiting trace sheen). The excavation would remove the impacted sediment at the edge of the river then extend back toward the toe of the landfill slope, removing impacted soil that represents the preferential migration pathway along which the

LNAPL impacts may have migrated toward the edge of the river. It is conservatively assumed that up to 6,400 cubic yards of soil may need to be removed. To the degree practicable, non-impacted surface soil would be removed, stockpiled, and characterized, which could significantly reduce the volume of soil requiring disposal. Excavated materials that do not contain elevated levels of PCBs, or other hazardous components would be used either in construction of landfill cover improvements or placed under the cap within the landfill. Impacted soils which are not appropriate for placement under the cap would be sent offsite for disposal. The excavated areas would be backfilled, as required to establish surface contours, with clean, compacted, low permeability fill and re-vegetated.

(2) *Treatment Technologies and Materials they will Address:* There are no treatment technologies associated with this alternative since this option elects for removal of contaminated materials.

(3) *Containment Component:* This alternative does not include any containment of contaminated materials since they will be removed.

(4) *Costs:* Including indirect costs associated with administration, engineering, and contingencies, the total 15-year present worth cost associated with implementing Alternative A is estimated to be \$227,000. Note that costs for institutional controls, construction setup/preparation, additional waste disposal, and O&M activities are included in the remedial alternatives for areas inside the landfill limits and, thus, are not considered here. It is assumed that, for excavated materials, most of the material will be placed under the final landfill cover and a minimal amount will need to be disposed of at an appropriate offsite facility. The total estimated cost is provided in 2006 dollars.

Alternative B – In Situ Containment by Extension of Existing Surface Cover Outside of Landfill Limits

(1) *Description of Alternative:*

This alternative would rely on the extension of the existing surface cover and would involve enhancing the surface materials covering or encapsulating impacted materials with “clean” material(s). This alternative would be assumed to involve the placement of 2-foot of clay cover material over selected portions of the LNAPL investigation area between the toe of the landfill slope and the edge of the river. The exposed bank along the river in this area will be covered, and an erosion protective layer will be provided.

(2) *Treatment Technologies and Materials they will Address:* There are no treatment technologies associated with this alternative since this option elects for removal of contaminated materials.

(3) *Containment Component:* This alternative solely involves containing the contaminated soil/sediment by placing a clay cover over the area.

(4) *Costs*: Including indirect costs associated with administration, engineering, and contingencies, the total 15-year present worth cost associated with implementing Alternative B is estimated to be \$35,000. Note that costs for institutional controls, construction setup/preparation, additional waste disposal, and O&M activities are included in the remedial alternatives for areas inside the landfill limits and, thus, are not considered here. The total estimated cost is provided in 2006 dollars.

9.2 Common Elements and Distinguishing Features of Each Alternative

The most noticeable common element between Alternative 3, 4a, and 4b is that all three address the exposed waste along the side slopes of the landfill and all three will involve enhancing the existing landfill cap. The distinguishing feature of each of these alternatives is what occurs after the landfill itself has been addressed. Alternative 4a uses a media treatment wall to intercept contaminated groundwater, while Alternative 4b uses pump and treat to address this contaminated groundwater.

Alternatives 1 and 2 involve no active remediation whatsoever, but Alternative 2 does implement institutional controls as the remedy to protect humans and the environment.

9.2.1 Institutional Controls

To be protective of human health and the environment, each active alternative described within this ROD requires use or access restrictions at the Site. Use restrictions or access restrictions would be implemented through the use of institutional controls. Institutional controls are administrative or legal constraints that minimize the potential for exposure to contamination by limiting land or resource use. Specific actions taken at sites to restrict access or use could include: Governmental Controls - such as zoning restrictions or ordinances; Proprietary Controls - such as easements or covenants; Enforcement Tools - such as consent decrees or administrative orders; and Informational Devices- such as deed notices or state registries. Several types of access or use restrictions employed simultaneously can increase the effectiveness of institutional controls.

For Ford Road Landfill, it is anticipated that institutional controls will be needed since the Site will have contaminants remaining at levels that do not allow unrestricted use or unlimited access. The goal of these institutional controls is to prevent direct contact exposure with the residual contamination. Therefore, digging or disturbance of the cover (or underlying contaminated material) will be prevented (or if needed, repairs will be made). There will be a program of Operation, Monitoring and & Maintenance, and this will include routine inspection of the cover and require any necessary repairs. It is anticipated that institutional controls will be relatively simple to develop, likely through a layered approach, including: proprietary controls (easements and/or covenants, including environmental covenants pursuant to Sections 5301.80 to 5301.92 of the Ohio Revised Code); deed restrictions; and enforcement tools (AOCs and/or consent decrees), which will ensure the long-term reliability of the controls.

9.2.2 Additional Work to be Performed During the Design Phase

Alternatives 3, 4a, 4b, A and B would require work to be performed prior to the implementation of the remedy, during the design phase of the project. The following activities will be done during the design phase of the remedy implementation process:

- Determining the precise extent of contamination in the northeastern corner of the Site where the LNAPL was found and contaminated soil/sediment is present; and
- Further qualitative analysis of the side slopes of the landfill side slopes for stability purposes and to aid in development of the actual layout of the regraded landfill.

9.2.3 Operation, Monitoring and & Maintenance

Each active remedial alternative will require a detailed program of Operation, Monitoring and & Maintenance for the soil and groundwater components. This program will be developed during remedial design, and modified as necessary after construction of the remedy. Groundwater will be monitored routinely to assess effectiveness of treatment and monitor trends and compared to Ohio EPA Water Quality Standards. The plan will also include provisions to ensure that soil and sediment RBCs have been attained after construction.

9.2.4 Surface Water Management

Each active remedy will result in considerable surface earthwork construction. A property-wide surface water management system will be developed to provide for the effective control of surface water runoff and to minimize future erosion. The property-wide surface water management system is anticipated to include:

- A grading plan that integrates final surface topography in the remedial areas into the surrounding areas.
- Use of proper slopes, berms, channels, etc., and surface armoring using natural vegetation and/or other materials to effectively convey surface water runoff off the remediated areas and provide erosion protection.
- A program of regular inspection, maintenance and repair.

9.3 Expected Outcomes of Each Alternative

Alternatives 1 and 2, which include limited active remediation measures, would not achieve protectiveness in the foreseeable future. Alternatives 3, 4a and 4b, each are expected to be protective, attain ARARs, and achieve the RAOs for the Site. Alternatives 3, 4a and 4b each leave the majority of the contaminated materials in place at the Site since it is an existing landfill, and would require long-term land-use restrictions on portions of the Site. As stated above,

alternatives A and B are not intended as stand alone remedies, but were each considered as an addition to one of the first four alternatives. Alternative A would completely eliminate any risks associated with the hot spot area of PCB contaminated soil/sediment since it would be removed, while Alternative B also would reduce the risks, but the hot spot area of contamination would remain in place. Each active remedial alternative will require additional design investigation and each requires about the same time to complete physical construction (about one to two years). None of the alternatives would leave Ford Road Landfill available for unrestricted use and unlimited exposure at the completion of the remedial action, although several leave the Site available for reuse.

9.4 Preferred Alternative

The preferred alternative described in the Proposed Plan for the Ford Road Landfill Site is a combination of Alternative 3 and Alternative A. The estimated cost of the preferred alternatives is roughly \$3.4 million.

10.0 Summary of Comparative Analysis of Alternatives

This section explains the U.S. EPA's rationale for selecting the preferred alternative. The U.S. EPA has developed nine criteria to evaluate remedial alternatives to ensure that important considerations are factored into remedy-selection decisions. These criteria are derived from the statutory requirements of Section 121 of CERCLA, the NCP, as well as other technical and policy considerations that have proven to be important when selecting remedial alternatives. When selecting a remedy for a site, U.S. EPA conducts a detailed analysis of the remedial alternatives consisting of an assessment of the individual alternatives against each of the nine evaluation criteria and a comparative analysis focusing upon the relative performance of each alternative against those criteria.

The nine evaluation criteria are described in more detail below.

Threshold Criteria

The two most important criteria are statutory requirements that must be satisfied by any alternative in order for it to be eligible for selection.

1. **Overall protection of human health and environment** addresses whether or not a remedy provides adequate protection and describes how risks posed through each pathway are eliminated, reduced or controlled through treatment, engineering controls or institutional controls.
2. **Compliance with ARARs** addresses whether or not a remedy will meet all of the Applicable or Relevant and Appropriate Requirements of other Federal and State environmental statutes and/or provide grounds for invoking a waiver.

Primary Balancing Criteria

Five primary balancing criteria are used to identify major trade-offs between remedial alternatives. These trade-offs are ultimately balanced to identify the preferred alternative and to select the final remedy.

3. **Long-term effectiveness and permanence** refers to the magnitude of residual risk and the ability of a remedy to maintain reliable protection of human health and the environment over time, once cleanup goals have been met.
4. **Reduction of toxicity, mobility, or volume through treatment** addresses the statutory preference for selecting remedial actions that employ treatment technologies that permanently and significantly reduce toxicity, mobility or volume of the hazardous substances as their principal element. This preference is satisfied when treatment is used to reduce the principal threats at the site through destruction of toxic contaminants, reduction of the total mass of toxic contaminants, irreversible reduction in contaminant mobility, or reduction of total volume of contaminated media.
5. **Short-term effectiveness** addresses the period of time needed to implement the remedy and any adverse impacts that may be posed to workers, the community and the environment during construction of the remedy until cleanup levels are achieved. This criterion also considers the effectiveness of mitigative measures and time until protection is achieved through attainment of the RAOs.
6. **Implementability** addresses the technical and administrative feasibility of a remedy from design through construction, including the availability of services and materials needed to implement a particular option and coordination with other governmental entities.
7. **Cost** includes estimated capital costs, annual operation and maintenance costs (assuming a 15-year time period), and net present value of capital and operation and maintenance costs, including long-term monitoring.

Modifying Criteria

These criteria may not be considered fully until after the formal public comment period on the Proposed Plan and RI/FS Report are complete.

8. **State Acceptance** considers whether the State support agency concurs with the selected remedy for the site.
9. **Community Acceptance** addresses the public's general response to the remedial alternatives and the preferred alternative presented in the Proposed Plan. This ROD includes a responsiveness summary that summarizes the public comments and U.S. EPA's response to those comments. The responsiveness summary is included as Appendix A.

The full text of the detailed analysis of the five remedial alternatives against the nine evaluation criteria (including both the individual analysis and the comparative analysis) is contained in the

FS Report for the Ford Road Landfill which is included in the Administrative Record for the Site. Because the two Modifying Criteria cannot be fully evaluated until public comment is received, they were not evaluated in the FS. The responsiveness summary of this ROD contains a more detailed discussion of public comments received. This section of the ROD summarizes the highlights of the comparative analysis.

10.1 Overall Protection of Human Health and the Environment

Each alternative provides for some level of protection through natural processes. Alternatives 2, 3, 4a, and 4b provide for increased protection of human health by limiting future use of the Site through institutional controls. Alternatives 3, 4a, and 4b all provide further protection by better containing COPCs within the landfill cap. Alternatives 4a and 4b also include additional actions to mitigate potential risks associated with COPCs in groundwater that contaminate surface water in the Black River. However, Alternatives 4a and 4b were conceived before completion of the risk assessment and the risk assessment and evaluations lead to the conclusion that Alternatives 4a and 4b are not warranted from a risk perspective since they would provide the same amount of protection of human health and the environment at Alternative 3. Alternative A provides additional protection outside of the landfill limits by selectively removing specific materials that contain elevated levels of COPCs identified as contributing to potentially unacceptable human health and/or environmental risk. Alternative B also provides additional protection through the in situ containment of materials that contain elevated levels of COPCs identified as contributing to potentially unacceptable human health and/or environmental risk.

10.2 Compliance with ARARs

Alternatives 1 and 2 do not address the COPCs present at the Site and, thus, would not be in compliance with state or federal ARARs. Alternatives 3, 4a, and 4b would meet the requirements of ARARs with respect to the remedial objectives relative to the area within the limits of the landfill and those areas of cascaded waste identified beyond the limits of the landfill. Outside of the landfill limits, Alternatives A would likely meet the requirements of ARARs. Alternatives B may also meet the requirements of ARARs, but it is preferred that the limited hot spot area of contamination simply be removed to comply with all ARARs.

10.3 Long-Term Effectiveness and Permanence

Alternative 1 would not be protective or reliable through time. Alternative 2 would decrease potential human exposure by limiting future use of the Site, but no other long-term increase or decrease in exposure or associated potential risks would occur. The process options associated with Alternatives 3, 4a, and 4b are proven and reliable technologies. However, there is a substantial amount of evidence from decades of remedial experiences demonstrating the difficulties associated with attempting to achieve permanent remedies through the use of pump and treat technology. In addition, while the use of permeable reaction wall technology in conjunction with a funnel and gate groundwater interception system has been successfully used at sites where they were appropriately applied, these technologies typically can be very difficult to implement and have significant potential for problems with respect to long term effectiveness,

maintenance and permanence. In the long term, the reliability of these alternatives would be assessed during annual Site inspections.

Outside of the landfill limits, Alternatives A and B would provide reliable and effective remedial options. In the long term, the reliability of these alternatives would be assessed during annual Site inspections and groundwater sampling results. In the event that the results of annual Site inspections and/or monitoring results indicate that the selected remedial components are not adequately achieving the RAOs established for this Site, it may be necessary to consider supplementing the selected remedial actions (e.g., groundwater/leachate control and treatment).

10.4 Reduction of Toxicity, Mobility, or Volume Through Treatment

Alternatives 1 and 2 provide no active remediation of COPCs that would reduce the toxicity, mobility, or volume of COPCs through treatment beyond that achieved through natural attenuation processes. Alternative 3 would reduce the mobility, but not toxicity or volume, of COPCs. By reducing the mobility of the contaminants under a new cap, toxicity and volume of COPCs will not pose a risk since all COPCs will be contained within the landfill. Alternatives 4a and 4b would reduce the mobility, volume, and toxicity of COPCs in groundwater by either in situ or ex situ treatment. Regarding the alternatives to address conditions outside of the landfill limits, Alternative A would reduce the mobility, volume, and toxicity of COPCs in the media through removal. Alternative B would reduce the mobility, but not toxicity or volume, of COPCs.

10.5 Short-Term Effectiveness

Alternatives 1 and 2 essentially would maintain current conditions and, as such, no short-term increase or decrease in exposure or associated potential risks would occur. The potentials for short-term exposure to workers and offsite migration of COPCs under Alternative 3 due to dust-borne releases are limited as all activities involved in this alternative will take place over the existing cap. Alternatives 4a and 4b would have some additional potential exposures related to trench excavation activities associated with these alternatives and the potential for offsite transport of impacted materials may be temporarily increased.

Outside of the landfill limits, excavation activities associated with Alternative A may result in the exposure of onsite workers to Site-impacted materials, and the potential for offsite transport of impacted materials may be temporarily increased. The potentials for short-term exposure to workers and offsite migration of COPCs due to dust-borne releases are limited, as all activities involved in Alternative B will take place over the existing cap.

10.6 Implementability

Alternatives 1 and 2 would not involve the implementation of any active remedial responses. No difficulties are anticipated in implementing institutional controls or sampling activities for Alternatives 2, 3, 4a, and 4b. The services and materials necessary to implement Alternatives 3,

4a, and 4b would be readily available. Alternative 4a would be difficult to implement due to the volume of media that would require replacement. Similarly, Alternative 4b would be difficult to implement due to issues associated with groundwater handling. More specifically, the large volume of water would make transportation and treatment relatively impracticable. In addition, while the use of permeable reaction wall technology in conjunction with a funnel and gate groundwater interception system has been successfully used at sites where they were appropriately applied, these technologies typically can be very difficult to implement and have significant potential for problems with respect to long term effectiveness, maintenance and permanence.

Outside of the landfill limits, the services and materials necessary to implement Alternative A or B would be readily available. Construction equipment would be obtained locally or transported to the Site from other areas, as appropriate. Removal in the selected areas is considered to be technically feasible.

10.7 Cost

Alternatives 1 and 2 have the lowest costs. However, these alternatives are not capable of achieving the RAOs for this Site. The costs related to Alternative 3 are moderately higher. However, this alternative would be anticipated to achieve RAOs relevant to the landfill while remaining reasonable from a fiscal perspective. While Alternatives 4a and 4b also have the ability to achieve the RAOs, both of these alternatives were originally conceived to mitigate possible risks to either the human health or the environment associated with COPC migration in groundwater which might not have been adequately addressed by Alternative 3. As there are no additional risks associated with the COPCs in groundwater downgradient that would not be addressed under Alternative 3, the application of this remedial alternative would serve only to further reduce the potential for migration of COPCs in groundwater. Given the fact these alternatives are not substantially more protective than Alternative 3, the increase in costs associated with either of these alternatives as compared with Alternative 3 is not warranted.

Both of the remedial alternatives being considered to address conditions outside of the landfill limits would be implementable from a fiscal perspective. A summary of the estimated costs for each alternative is provided in the Table 9 below.

Alternative	Capital Cost	O&M Cost	Other Costs ¹	Total Cost (rounded)
1	\$ -	\$ 45,500	-	\$ 45,500
2	\$ 51,000	\$ 528,000	\$ 44,900	\$ 624,000
3	\$ 1,932,600	\$ 535,900	\$ 898,800	\$ 3,367,000
4a	\$ 2,271,800	\$ 1,593,500	\$1,051,300	\$ 4,916,000
4b	\$ 2,148,700	\$ 8,005,100	\$ 996,000	\$11,150,000
A	\$ 167,900	\$ -	\$ 58,800	\$ 226,700
B	\$ 25,500	\$ -	\$ 9,000	\$ 35,000

Note:

¹This sum includes indirect, administration, engineering, and contingency costs.

10.8 State Agency Acceptance

The State of Ohio was involved with the Site before it was listed as a Superfund Site, and has continued to be actively involved with the Site throughout the RI/FS process, has reviewed documents and provided comments to U.S. EPA and the Ford Road Group, and provided support at the public meeting for the proposed plan.

Although the State of Ohio has not yet provided a concurrence letter for this ROD, the State has indicated that it intends to concur with the selection of Alternative 3 and Alternative A for the Ford Road Landfill Site. The State of Ohio's concurrence letter will be added to the Administrative Record upon receipt.

10.9 Community Acceptance

During the public comment period on the Proposed Plan, the community expressed very few concerns with the proposed remedy for the Ford Road Landfill. As discussed in the Responsiveness Summary found as Appendix A to this ROD, public concerns focused on dealing with the current state of the landfill by implementing the proposed remedies, Alternative 3 and Alternative A.

11.0 Principal Threat Wastes

The NCP establishes an expectation that U.S. EPA will use treatment to address principal threats posed by a site wherever practicable. The term "principal threat" refers to source materials that are considered to be highly toxic or highly mobile that generally cannot be reliably contained or would present a significant risk to human health or the environment should exposure occur. The LNAPL found at Ford Road Landfill could have been termed as a principal threat if left in place. This source, though, can be reliably contained by removing the LNAPL and the surrounding contaminated media as part of the remedy at the Site. Therefore, the principal threat waste definition does not apply to the LNAPL found at the Site.

12.0 Selected Remedy

This section describes the selected remedy and provides U.S. EPA's reasoning behind its selection. Alternatives can change or be modified if new information is made available to U.S. EPA through further investigation or research. An appropriate range of alternatives was developed, based upon the initial screening of technologies, the potential for contaminants to impact the environment, and site-specific RAOs and goals.

12.1 Identification of the Selected Remedy and Summary of the Rationale for its Selection

Based on the analysis of the nine criteria conducted in the FS Report and summarized in Section 10 of this ROD, the selected remedy for the Ford Road Landfill Site is a combination of both

Alternative 3 and Alternative A. These two alternatives represent the best balance of overall protectiveness, compliance with ARARs, long-term effectiveness and permanence, costs, and other criteria, including State and community acceptance.

12.2 Description of the Selected Remedy

A summary of the selected remedies, Alternative 3 and Alternative A are provided below (See Figure 5 and Figure 6 for a conceptual layout):

- The cascaded debris on the side slopes of the landfill will be collected and managed on-site. A Waste Management Plan will be developed and approved by U.S. EPA that determines what waste will be shipped off-site (if any) and what will be placed back into the existing landfill or covered by an extended cap. The entire landfill would then be re-graded and appropriately capped to meet all ARARs identified for the Site. The cap would then be vegetated to maintain a more "natural" state.
- North and south perimeter soil sampling will be performed to ensure that all ancillary waste was identified prior to the end of the remedy. This confirmation sampling will have to meet each COC's respective RBC before moving on with completing the final landfill cover (See Tables 4, 5, 6 and 7 for RBCs).
- A surface water plan will be developed and approved by U.S. EPA and various models will be used to ensure that the system is fully functioning and reducing the infiltration of water through the landfill. A site water-balance model will be compiled after the remedy is in place to ensure that the cap installation was done properly and is functioning as intended.
- For groundwater monitoring, Ohio's Water Quality Standards, Lake Erie Basin, in Ohio Administrative Code Chapter 3745-1 Outside Mixing Zone Average for Aquatic Life, will be used to ensure that the groundwater entering into the Black River meets the appropriate standard to eliminate the risks to both human health and the environment (See Table 10). This monitoring also includes any COCs identified when sampling the leachate seeps at the Site.
- The area of contaminated soil/sediment in the northeastern corner of the landfill will be fully delineated to characterize the extent of contamination. Soil/sediment will then be managed on-site to the extent possible. Soil/sediment that is found to be hazardous will be shipped to an appropriate licensed facility. Soil/sediment that is not hazardous but has contaminant levels above RBCs will be placed into the existing landfill. Soil/sediment that has contaminant levels below RBCs can be used in the construction of the landfill cover. This soil and sediment area will have to meet each COC's respective RBC for both soil and sediment (See Tables 4, 5, 6 and 7 for RBCs).

- Current streambank inspections downgradient of the northeastern corner of the landfill do not show any evidence of the black staining where contaminant seepage occurred. Confirmatory soil sampling will be performed if any evidence of this is observed at any time. This will protect and help restore riverine resources to their highest beneficial use and serve to eliminate any risks to human and wildlife population.
- Periodic leachate sampling will occur at the areas staked during the RI (USACE Stake). If these areas become regarded or altered during construction activities, periodic checks of potential seeps will be conducted to ensure that no seepage is occurring. Leachate sampling will have to meet Ohio's Water Quality Standards, Lake Erie Basin, in Ohio Administrative Code Chapter 3745-1 Oustide Mixing Zone Average for Aquatic Life (Table with OMZA standards will be added for leachate).
- Regular inspections and sampling will occur at the Site. O&M will include annual visual inspections of the Site for 15 years and sampling activities for 15 years. Wells FR-MW-3, FR-MW-4, and FR-MW-6 will be sampled annually for five years for metals and VOCs. Wells FR-MW-1, FR-MW-7, and FR-MW-8 will be sampled quarterly for two years and semiannually for the following three years for a full analytical suite. Once the initial five-year period is complete and if all contaminant levels are found to be below risk levels, wells FR-MW-1, FR-MW-6, FR-MW-7, and FR-MW-8 will be sampled annually for an additional 10 years. A full O&M plan will be developed after completion of the Remedial Design phase to incorporate any additional sampling that will be required.
- Any institutional controls will be put in place at the site as needed, such as deed restrictions and groundwater use restrictions. Also, signage will be required surrounding the Site stating that hazardous materials are present until after the remedy has been implemented.
- The existing landfill gas monitoring system will be operated and maintained and all appropriate state requirements will be met for the life of the Site.
- Once the remedy has been implemented, the areas on the landfill footprint that had existing grasses, plants and trees will be revegetated with appropriate native vegetation that will not compromise the new landfill cover. The areas within the Site, but not within the footprint of the new landfill that had a limited amount of vegetation removed (due to construction traffic, soil management areas, etc) during the implementation of the remedy will be revegetated with new shrubs, trees or grasses as approved by the U.S. EPA.

12.3 Summary of the Estimated Remedy Costs and Time Required for Implementation

The estimated cost of the selected remedy for the Ford Road Landfill is approximately \$3.4 million. The design of the remedial alternatives is expected to take approximately one to two years to complete and the physical construction of the remedy is also estimated to take

approximately one to two years to complete. Table 11 and Table 12 show the cost breakdown for both Alternative 3 and Alternative A.

12.4 Expected Outcomes of the Selected Remedy

The selected remedies for the Ford Road Landfill Site, Alternative 3 and Alternatives A, will achieve the RAOs for the Site. The selected remedies will be protective and are expected to attain ARARs. The following are expected to occur by implementing Alternative 3 and Alternative A:

- Current groundwater levels in the downgradient wells generally concur with Black River stages to indicate that upgradient landfill infiltration controls (capping, grading, stormwater management) are functioning properly for the current cap – it is those areas outside of the current cap on the steep side slopes of the landfill that need to be addressed since most of the waste material is exposed in these areas. Once the remedy is implemented, the exposed portions of the landfill waste will be covered and will prevent the infiltration of water through the waste material, preventing any future contamination of any media.
- Groundwater sampling results should show positive results within the initial five year sampling period. Specifically, metals contamination in the eastern and southeastern wells should decline and sampling in the northeastern corner of the site should show no PCB, metals or PAH contamination in the groundwater meaning that surface water to the Black River is not being contaminated.
- The upgradient well (MW-6) should show a lowering water-level trend due to the reduced landfill infiltration and associated modeling.
- The remedies will be re-evaluated if groundwater sampling data exhibits trends indicative of remedy failure (upward trends of COPCs) or variable results that indicate uncertainty in the remedy.
- The selected remedy leaves a majority of the contaminated materials in place at the Site, and requires long-term land-use restrictions on some portions of the Site. Ford Road Landfill will not be available for unrestricted use and unlimited exposure at the completion of the remedial action, and institutional controls will be required.
- After the physical construction period (estimated to be about one to two years), there will be immediate risk reductions to human and ecological receptors by both the elimination of the exposed waste material along the side slopes of the landfill for soil and the removal of the hot spot area of PCB contaminated soil and sediment along the Black River. After construction, there will be immediate benefits to groundwater because the primary source of contamination (PCBs in northeastern corner of Site) will be removed, resulting in the removal of the LNAPL source.

13.0 Statutory Determinations

Under CERCLA Section 121 and the NCP, remedies selected for Superfund sites are required to be protective of human health and the environment, comply with applicable or relevant and appropriate requirements (unless a waiver is justified) and be cost effective. The following sections discuss how the selected remedies for Ford Road Landfill Site meet these statutory requirements.

13.1 Protection of Human Health and the Environment

The current and potential future risks at Ford Road Landfill are primarily due to the presence of PCBs in the soil, sediment and groundwater in the northeastern corner of the Site and the lead in surface soils on the side slopes of the landfill. Implementation of the selected remedy will be protective of human health and the environment through the removal of the cascading waste on the slopes of the landfill (one source of groundwater contamination) and removal of the hot spot area of PCB contaminated soil and sediment (the other source of groundwater contamination). The site specific RAOs were developed to protect current and future receptors that are potentially at risk from contaminants at the Site. The selected remedy will meet the RAOs. The Site will not be available for unrestricted use and unlimited exposure at the completion of the remedial action and institutional controls will be required to ensure that the remedy remains protective.

13.2 Compliance with ARARs

Section 121(d) of CERCLA requires that Superfund remedial actions meet ARARs. 8A – 8C provides a list of all ARARs that have been identified and will be met under this ROD. In addition to ARARs, non-enforceable guidelines, criteria, and standards may be useful in designing the selected remedy. As described previously in Section 8.2 of this ROD, these guidelines, criteria and standards are known as TBCs. The selected remedy will comply with the ARARs for the Site.

13.3 Cost Effectiveness

U.S. EPA has determined that the selected remedy for the Ford Road Landfill Site is cost effective and represents a reasonable value for the money to be spent. A cost-effective remedy in the Superfund program is one whose costs are proportional to its overall effectiveness. The overall effectiveness of the potential remedial alternatives for the Site was evaluated in the FS by considering the following three criteria: long-term effectiveness and permanence, reduction in toxicity, mobility and volume through containment, and short-term effectiveness. The overall effectiveness was then compared to cost to determine whether an alternative is cost effective. Of the remedial alternatives evaluated for this Site, Alternative 3 and Alternative A (the selected remedy) provide the highest degree of overall cost effectiveness.

13.4 Five-Year Review Requirements

The NCP requires that the remedial action be reviewed no less often than every five years if the remedial action results in hazardous substances, pollutants or contaminants remaining at the Site above levels that allow for unlimited use and unrestricted exposure. Because this remedy will result in hazardous substances, pollutants, or contaminants remaining on the Site above levels that allow for unlimited use and unrestricted exposure at the completion of the remedial action, a statutory review will be conducted within five years after initiation of remedial action to ensure that the remedy is, or will be, protective of human health and the environment. Section 12.4 of this ROD describes the expected outcome of the selected remedy.

14.0 Documentation of Significant Changes

The Proposed Plan for Ford Road Landfill was released for public comment near the end of June 2006 and the public comment period ran from July 10 through August 9, 2006. The Proposed Plan identified Alternative 3 and Alternative A (Enhancement of landfill and addressing cascaded waste and hot spot removal of PCB contaminated area), as the preferred alternative for the Ford Road Landfill. U.S. EPA reviewed all written and verbal comments submitted during the public comment period and determined that no significant changes to the remedy, as originally identified in the Proposed Plan, were necessary or appropriate.

TABLES

FIGURES

APPENDIX A

APPENDIX A

RESPONSIVENESS SUMMARY for the Ford Road Industrial Landfill Site

This Responsiveness Summary provides both a summary of the public comments U.S. EPA received regarding the Proposed Plan for the Ford Road Industrial Landfill Site and U.S. EPA's responses to those comments. The Proposed Plan was released to the public near the end of June 2006, and the public comment period ran from July 10, 2006, through August 9, 2006. Ohio EPA provided support on the Proposed Plan. U.S. EPA held a public meeting regarding the Proposed Plan on July 26, 2006, at the French Creek Nature Center in Elyria, Ohio. Ohio EPA participated in the public meeting, assisted in responding to questions, and provided support at the meeting.

U.S. EPA received written comments (via regular and electronic mail) and verbal comments (at the public meeting) during the public comment period. In total, U.S. EPA received comments from approximately 6 different people. Copies of all the comments received during the public meeting (including the verbal comments reflected in the transcript of the public meeting) are included in the Administrative Record for the Site. U.S. EPA carefully considered all comments prior to selecting the final Site remedy documented in the ROD.

This Responsiveness Summary does not repeat verbatim each individual comment, except in reference to the comments sent in by the Ford Road Group. Rather, the comments are summarized and grouped by the type of issue raised. The comments fell within several different categories: support for the proposed remedy, future use of the Site, concerns during the Site cleanup and one request for a different alternative.

U.S. EPA received a comment letter dated August 8, 2006, submitted on behalf of the Ford Road Landfill PRP Group (the Group of companies who signed the Order to pay for the investigation of the Site). The Ford Road Group has cooperated with Ohio EPA and U.S. EPA to address the Site. The Ford Road Group was represented at the public meeting to be available if needed. A summary of the Ford Road PRP Group's comments and U.S. EPA's responses is included below.

The remainder of this Responsiveness Summary contains a summary of the comments U.S. EPA received and U.S. EPA's responses to those comments, grouped by category.

I. SUPPORT FOR THE PROPOSED REMEDY

The Ford Road Group expressed support for the proposed remedy for the Site (Alternative 3 – Enhancing the cover of the landfill and incorporating cascaded landfill debris back into the landfill AND Alternative A – Hot spot removal of PCB contaminated soil/sediment in the northeastern corner of the Site).

Several commentors expressed support of the cleanup of the Ford Road Landfill Site and indicated that the need for protection to human health and the environment from any contaminants existing on the Site is a high priority.

II. FUTURE USE OF THE SITE

A few commentators requested that whatever cleanup plan was ultimately selected for this Site, that the plan allow for the Site to be left as “naturally” as possible. The area around the Site and on the side slopes of the landfill itself has a mixture of field, scrub shrub, floodplain forest, and upland forest habitat. The top of the landfill is a level grassed area. Also, it was requested that after the cleanup the Site be left in a way that it could possibly be utilized for recreational purposes such as bike paths or multi-purpose trails.

It is anticipated that, during the cleanup, there will be a need to clear some of the vegetation away, especially on the side slopes of the landfill to collect exposed debris, but especially if the side slopes of the landfill required modification for stability purposes. This being said, it is the Agency’s wish to also keep the area in a natural state to allow for recreational use once the cleanup efforts are complete. Therefore, unnecessary removal of trees, shrubs or other vegetation will not occur at the Site and areas that have been cleared will be revegetated after the remedy is complete.

III. CONCERNS DURING SITE CLEANUP

One comment expressed concern with the current state of the Site and possible health effects during the Site cleanup. The suggestions were to 1) put signs around the property warning about the hazardous nature of the Site; 2) installing a split rail fence around the Site; and 3) receiving notice before cleanup actions occur at the Site so that residents in the area can keep their doors and windows closed.

The area surrounding the Site will have signs posted that warn of the hazardous nature of the Site (both contamination and the physical hazards).

It is not planned to have a split rail fence installed along the Site since it will not keep trespassers off of the Site and construction traffic will need access to the Site.

U.S. EPA will be sending out mailings throughout the course of this remedy at the Site and it will be noted that a mailing should occur once a timeframe is decided, informing residents in the area that earth moving activities will be occurring at the Site so residents can take precautions if desired.

IV. PREFERENCE FOR DIFFERENT ALTERNATIVE

One comment indicated their preference for Alternative 4b – Groundwater Control – Pump and Treat instead of Alternative 3 stating that this choice would stop landfill pollution from contaminating the nearby Black River. Based upon U.S. EPA's evaluation of all of the cleanup options, Alternative 3 provided the same level of protection to humans and the environment, specifically in regard to the Black River. This alternative was originally conceived before completion of the risk assessment to mitigate possible risks to either the human health or the environment associated with chemicals of potential concern (COPCs) migration in groundwater which would not be adequately addressed by the previously discussed alternatives. As the risk assessment and evaluations in this document have shown, there are no additional risks associated with the COPCs in groundwater downgradient that would not be addressed under Alternative 3. Therefore, the application of this remedial alternative is not warranted from a risk perspective.

V. FORD ROAD LANDFILL PRP GROUP COMMENTS

The Ford Road Group had several comments specific to the Proposed Plan language that are addressed below:

Comment 1

Statement: In the first paragraph of the Proposed Plan, the document states "The U.S. EPA is proposing to collect and dispose of debris found on the southern and northern side slopes of the Ford Road Industrial Landfill.

Comment: As stated in the RI/FS it is planned that waste materials in these areas of the site will be incorporated under the landfill cap or the cap extended over these areas. The RI/FS does not envision disposal of these materials and this statement should be revised to state "excavation and on-site management of debris".

Response: U.S. EPA agrees that the cascaded debris on the side slopes will be incorporated back into the existing landfill or covered by extending the landfill cap, unless something is found that would require off-site disposal (i.e. drums containing hazardous waste, etc). The Proposed Plan serves as a generalization to inform the public and is not intended to supply detailed information relating to the remedy.

Comment 2

Statement: In the second paragraph, referring to Alternative A, the document states "The proposed cleanup of this soil area would involve digging it up and transporting it off-site to another landfill facility".

Comment: This broad statement assumes that all soil excavated in this area will be transported off-site for disposal. The RI/FS states that non-impacted surface soil will be removed, stockpiled and characterized. Soil that is demonstrated to be non-hazardous or meets required standards would be used either in construction of landfill cover improvements or placed under the existing cap within the landfill. While some of the soils to be excavated are contaminated, to some extent, they may be classified as remediation wastes under RCRA ARAR, not as hazardous waste. U.S. EPA policy for CERCLA includes a preference for on-site management of waste and the ROD should state that "contaminated soil and wastes will be managed on-site, to the extent possible".

Response: U.S. EPA agrees that it is likely that not all soil/sediment will need to be shipped off-site for disposal. However, any materials that are found to have hazardous levels of contaminants will need to be shipped off-site to an appropriate disposal facility. Material that is found to have contamination above RBCs, but below hazardous levels can be placed within the existing landfill and materials found to have levels below RBCs can be used in the creation of the cover of the landfill. Again, the Proposed Plan serves as a generalization to inform the public and is not intended to supply detailed information relating to the remedy.

Comment 3

Statement: On page 2, fifth paragraph, the Proposed Plan states "Browning-Ferris" disposed of chemicals, heavy metals, sanitary sewage wastes, paint sludges and small quantities of unknown hazardous waste".

Comment: If small quantities of "unknown" waste were disposed in the landfill, it cannot be stated that these wastes were hazardous.

Response: The statement above was taken directly from the Health Consultation Report generated by the Ohio Department of Health. The Health Consultation Report also stated that "Harshaw Chemicals, a subsidiary of Gulf Oil Company, sent more than 700 tons of hazardous materials to the Ford Road Landfill from 1950 until 1974. Materials sent included heavy metals, other inorganic substances, and miscellaneous catalysts and insecticides (OEPA 1980)." It is very likely that the Ford Road Landfill did accept hazardous waste during some time in its period of operation, although BFI may have only play a small role in contributing to the amount of hazardous waste present in the landfill.

Comment 4

Statement: The last paragraph of page 2 and the first paragraph of page 3 states "Sampling showed the soil on the northern and southern slopes where the waste has spilled out contains high levels of organic compounds, 3 PCBs and metals. Underground water samples also showed widespread metal and PCB contamination on the northeastern corner of the Site."

Comment: It is misleading to state that PCB contamination is "widespread" in the northeastern corner of the Site. PCBs were detected in groundwater in one small area of the site. This contamination appears to be isolated and currently cannot be attributed to flow from the landfill based on the lack of PCBs in leachate analyses. The term "cascaded" or a similar term, seems more appropriate than "spilled out".

The term "high levels" and "dangerous" are subjective and may be unduly alarming. EPA should make more of an effort to put site concentrations and risks in perspective. This was done by EPA at the July 26, 2006 public meeting through responding to questions raised by residents. As indicated by EPA at that meeting, there is no imminent risk and no need for emergency/interim actions.

Also, the statement on the bottom of page 1 indicating that semi-volatile organic compounds dissolve in water and evaporate easily is questionable.

Response: U.S. EPA agrees that the PCB contamination is not widespread across the Site and is in fact in a very limited area of the Site. Also, U.S. EPA agrees that there are no "emergency level risks" at the site that warrant immediate action. Finally, the wording in the Proposed Plan relating to semi-volatile compounds dissolving in water should not be included.

Comment 5

Statement: In paragraph 8, page 3, the projected cost for Alternative 1 – No Further Action is shown as \$0.

Comment: The RI/FS estimate for Alternative 1 is \$46,000.

Response: The Proposed Plan is incorrect and should state \$46,000.

Comment 6

Statement: The discussion of Alternative 3, paragraph 10, page 3, states "If to the waste on the slopes is found to be too hazardous, it would be moved to an approved disposal facility somewhere else".

Comment: This statement "too hazardous" is a general statement that should be corrected. It is expected that most, if not all, of this material will be incorporated under

the landfill cap. As stated in a previous comment, the ROD should specify that "contaminated soil and wastes will be managed on-site to the extent possible". If materials are to be disposed off-site, the ROD should discuss the process that will be used to make this determination, in accordance with CERCLA guidance, policies and ARARs. If this is not known at present, the ROD should state that waste materials will be managed in accordance with a Waste Management Plan to be developed as part of the remedial design and approved by U.S. EPA.

Response: Again, the Proposed Plan serves as a generalization to inform the public and is not intended to supply detailed information relating to the remedy. The statement "too hazardous" was simply used to indicate what might need to be shipped off-site without going into additional details relating what those determinations include.

The suggestion of creating a Waste Management Plan was incorporated into the ROD since there is a chance for a small amount of cascaded debris to be shipped off-site to an appropriate facility.

Comment 7

Statement: The third paragraph, page 4, states that "It is planned that this contaminated soil and mud would be transported off-site to another landfill facility".

Comment: Materials excavated as part of Alternative A should be managed on-site to the extent possible and only disposed off-site if required by ARARs, characteristics of the material, and concentrations, require off-site disposal. This broad statement would require off-site disposal of all material from Alternative A and should be clarified. The ROD should state that all materials excavated as part of Alternative A will be managed, on-site to the extent possible. EPA should avoid the use of non-technical term "mud" in favor of "soil" or "sediment".

Response: The Proposed Plan is a non-technical document that must be presented in a way that is understandable to individuals, both technical and non-technical. Please also refer to Comment 2 for additional response information.

Comment 8 – Cover Materials

The RI/FS specifies that low permeability soil will be placed over areas where current cover is less than 2-feet. This will comply with the ARAR for the 1976 cap. However, while this type of cap can be constructed, it could require the removal of all trees and shrubs within the landfill footprint. Also, it will limit the design process and should be revised to provide more flexible language and allow the potential for innovation and alternative technologies. The ROD should state that "the cover will consist of 2-feet of low permeability soil...or a cover that is equally protective and approved by the U.S. EPA". This language would allow the design to potentially include, geosynthetic and geocomposite materials in certain areas, if necessary, and possibly less cover.

Response: The ROD does contain language that states “the cover will consist of 2-feet of low permeability soil or a cover that is equally protective and approved by the U.S. EPA” in order to allow for possible innovative cover enhancements. However, all of the work performed out at the Site will comply with both State and Federal ARARs unless it is determined by the Agencies that a provision can be made that is more beneficial to the project and equally protective of human health and the environment.

Comment 9 – Cover Materials

The RI/FS assumes that all vegetation will be removed from the landfill “footprint”, as typically required for conventional landfill capping. However, this statement does not allow consideration of leaving large trees that contribute to the natural setting and may have value if the decision is made in the future to develop the Site as some type of park. The trees also appear to promote slope stability and limit soil erosion potential. For those reasons, the PRPs concur with the comment voiced by the Site owner (MetroParks) at the July Public Meeting that the vegetation/trees should remain in a natural state to the extent possible. ROD language should allow consideration of an alternative, such as a limited phytocap, that might leave trees largely intact. If considered, this type of capping would be evaluated as part of the remedial design and would have to be approved by U.S. EPA based on a demonstration of effectiveness.

Response: The U.S. EPA disagrees with the suggestion to leave large trees in place on the side slopes of the landfill. In order to provide an effective landfill cap, the entire landfill must be adequately covered and it must be ensured that trees and shrubs with large root systems do not compromise the integrity of the cap. That being said, U.S. EPA agrees that the area should be left as naturally as possible and highlights that the trees and shrubs that are on the Site but not within the footprint of the landfill itself will remain in place to the degree possible. The cap itself will be revegetated with materials appropriate for landfills after the enhancements are complete so that it provides a more natural setting and areas outside of the landfill footprint that had vegetation removed for remedy implementation purposes will be revegetated with new trees, shrubs and other flora.

Comment 10 – PRP Group

During the July Public Meeting, U.S. EPA listed the respondents that signed the AOC as the Ford Road Landfill PRPs. While this Group does comprise some of the PRPs, additional PRPs have been identified to the U.S. EPA. A list of additional PRPs was most recently provided to the U.S. EPA on Aug. 1, 2006. Special Notice letters should be sent to the additional PRPs and these PRPs should be included in the ROD, along with the City of Elyria and the MetroParks, which were identified as PRPs by the U.S. EPA.

Response: U.S. EPA is aware that there are potentially responsible parties other than those who signed onto perform the investigation work for Ford Road Landfill.

After the completion of the ROD, U.S. EPA will begin discussions of the next phase of the project that concerns negotiating the cleanup work with potentially responsible parties.

APPENDIX B

**U.S. ENVIRONMENTAL PROTECTION AGENCY
REMEDIAL ACTION**

**ADMINISTRATIVE RECORD
FOR
FORD ROAD LANDFILL SITE
ELYRIA, LORAIN COUNTY, OHIO**

**ORIGINAL
JULY 24, 2006**

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
1	07/02/02	U.S. EPA	Respondents	Administrative Order by Consent for the Ford Road Landfill Site	
2	06/12/03	Ohl, M., U.S. EPA	Steerman, P., Steerman Environmental Management & Consulting, LLC	Letter re: RI/FS Work Plan Approval with Conditions for the Ford Road Landfill Site	
3	11/05/03	Gereby, C., Ohio EPA	Steerman, P., Steerman Environmental Management & Consulting, LLC	Letter re: Additional Sampling at the Ford Road Landfill Site	
4	03/05/04	McCune, W., Blasland, Bouck & Lee, Inc.	Collier, D., U.S. EPA	Preliminary Site Characterization Summary for the Ford Road Landfill Site	
5	04/02/04	McCune, W., Blasland, Bouck & Lee, Inc.	Collier, D., U.S. EPA	Letter re: Preliminary Response Actions and Remedial Technologies for the Ford Road Landfill Site	
6	04/23/04	Collier, D., U.S. EPA	Steerman, P., Steerman Environmental Management & Consulting, LLC	Letter re: Preliminary Response Actions and Remedial Technologies Letter for the Ford Road Landfill Site	
7	06/08/04	Collier, D., U.S. EPA	Steerman, P., Steerman Environmental Management & Consulting, LLC	Letter re: Response to Preliminary Site Characterization Summary for the Ford Road Landfill Site	
8	06/16/04	Collier, D., U.S. EPA	Steerman, P., Steerman Environmental Management & Consulting, LLC	Letter re: Proposed Additional Monitoring Well Locations at the Ford Road Industrial Landfill Site	
9	07/00/04	Weston Solutions, Inc.	U.S. EPA	Community Involvement Plan for the Ford Road Industrial Landfill Site	

**FORD ROAD LANDFILL
ADMINISTRATIVE RECORD
PAGE 2 OF :**

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
10	07/21/04	McCune, W., Blasland, Bouck & Lee, Inc.	Collier, D., U.S. EPA	Letter re: Supplemental Activities to Assess LNAPL Observation in MW-1 at the Ford Road Landfill Site	
11	09/30/04	McCune, W., Blasland, Bouck & Lee, Inc.	Collier, D., U.S. EPA	Letter re: Responses to U.S. EPA Comments on the Preliminary Site Character- ization Summary for the Ford Road Landfill Site	
12	02/28/05	McCune, W., Blasland, Bouck & Lee, Inc.	Collier, D., U.S. EPA	Letter re: Second FS Deliverable Preliminary Remedial Alternatives for the Ford Road Landfill Site	
13	03/31/05	McCune, W., Blasland, Bouck & Lee, Inc.	Collier, D., U.S. EPA	Letter re: Second Risk Assessment Deliverable for the Ford Road Landfill Site	
14	04/27/05	Collier, D., U.S. EPA	Steerman, P., Steerman Environmental Management & Consulting, LLC	Letter re: Comments on the Second Risk Assessment Deliverable for the Ford Road Landfill Site	
15	05/20/05	Collier, D., U.S. EPA	Steerman, P., Steerman Environmental Management & Consulting, LLC	Letter re: Response Letter to Second Risk Assessment Deliverable for the Ford Road Landfill Site	
16	08/11/05	Collier, D., U.S. EPA	Steerman, P., Steerman Environmental Management & Consulting, LLC	Letter re: Comments on the June 2005 RI/FS for the Ford Road Landfill Site	
17	10/05/05	McCune, W., Blasland, Bouck & Lee, Inc.	Collier, D., U.S. EPA	Letter re: Responses to U.S. EPA Comments on the RI/FS for the Ford Road Landfill Site	
18	10/20/05	Collier, D., U.S. EPA	Steerman, P., Steerman Environmental Management & Consulting, LLC	Letter re: Comments on the Ford Road Landfill Group's Response to Comments on the RI/FS for the Ford Road Landfill Site	

**FORD ROAD LANDFILL
ADMINISTRATIVE RECORD
PAGE 3 OF 3**

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
19	02/23/06	Schmidt, J., & M. Tukel, Ohio EPA	Martin, J., Lorain County Metropolitan Park District	Letter re: Explosive Gas Monitoring Plan Certification Concurrence for the Ford Road Landfill Site	
20	03/00/06	Blasland, Bouck & Lee, Inc.	U.S. EPA	Remedial Investigation/ Feasibility Study Report for the Ford Road Landfill Site	
21	04/17/06	Collier, D., U.S. EPA	Steerman, P., Steerman Environmental Management & Consulting, LLC	Letter re: Comments on the Second Version of the Draft RI/FS for the Ford Road Landfill Site	
22	05/10/06	Collier, D., U.S. EPA	Steerman, P., Steerman Environmental Management & Consulting, LLC	Letter re: Approval of RI/FS for the Ford Road Industrial Landfill Site	

APPENDIX B

**STATEMENT OF WORK FOR
THE REMEDIAL DESIGN AND REMEDIAL ACTION
AT
FORD ROAD INDUSTRIAL LANDFILL SITE
ELYRIA, OHIO**

I. PURPOSE AND SITE HISTORY

The purpose of this Statement of Work (SOW) is to set forth requirements for implementation of the remedy selected in the Record of Decision (ROD) for the Ford Road Industrial Landfill Site (Site), which was signed by the United States Environmental Protection Agency (U.S. EPA) Region 5 on September 27, 2006. When submitting deliverables for designing and implementing the remedial action (RA) at the Site, the Settling Defendants shall follow the ROD, this SOW, the approved Remedial Design (RD) Work Plan, the approved RA Work Plan, U.S. EPA Superfund Remedial Design and Remedial Action Guidance and any additional applicable guidance provided by U.S. EPA.

The Ford Road Landfill is a 15-acre inactive facility located in Elyria, Lorain County, Ohio. The Site is located on the northern edge of Elyria on Ford Road, about 1.5 miles from Interchange 8 of the Ohio Turnpike, Interstate 90. The Site is not fenced and is accessible from all sides. Several residences are located within one mile of the site with the nearest being about 200 feet northwest of the site. The Site is bordered by an intermittent stream and a sewer main that is covered with riprap to the north, a ravine and rural land to the south, the Black River to the east, and Ford Road and the Black River Preserve to the west. Site topography is characterized by the gently sloping top surface of the landfill which descends from an elevation of approximately 690 feet above mean sea level (amsl) at the western boundary of the Site along Ford Road to an elevation of approximately 680 feet amsl at the top of the slope around the northern, eastern, and southern edge of the landfill surface. The northern, eastern, and southern flanks of the landfill slope steeply down to the 100-year flood plain of the Black River at an elevation of approximately 610.9 feet amsl. A swale, oriented approximately north-south, was constructed along the western edge of the landfill. The swale directs runoff into a storm water drain that discharges into the intermittent stream which is a crushed stone-filled drainage feature that extends from Ford Road to the Black River immediately north of the Site.

The U.S. EPA is the lead agency and the Ohio Environmental Protection Agency (Ohio EPA) is the support agency for this site.

Landfilling activities are believed to have begun with the placing of local municipal waste into the ravine extending east from Ford Road in the early 1900s. Available records indicate that in 1945 the property was purchased by Jack and Max Joseph, who operated a public landfill, charging tipping fees, until 1964. George C. Brotherton and Phyllis J. Brotherton, doing business as Brotherton Disposal, leased that property in 1964 from Jack Joseph and operated the landfill until March 1966, when Brotherton Disposal, Inc. was incorporated. Brotherton Disposal, Inc. operated the landfill from March 1966 until May 1972, when Brotherton Disposal, Inc. merged with Browning-Ferris Industries of Ohio, Inc. (BFIOH). BFIOH operated the landfill on a restricted basis until June 1974. During operation of the landfill in the 60s and 70s,

municipal and various industrial wastes in drums and in bulk were accepted, including, but not limited to: 700 tons of hazardous material; 3.3 million pounds of chemical wastes; and sludge (reportedly 32,000 gallons per day), from 1963 to 1970, and many of these wastes were burned onsite. Foundry sand, slag, and dried sludges were often used for cover material. Landfill operations ended in 1974, but the landfill was not closed under U.S. EPA guidelines. The current owner of the Site is the Lorain County Metropolitan Park District.

Past investigations at the Ford Road Landfill appear to have begun in the early 1970s. An Ohio EPA sanitary landfill inspection form reported conditions observed at the landfill on December 21, 1972, including the presence of leachate near the northeastern corner of the Site. It was further observed that insufficient cover material was present for the landfill. An inspection of the landfill in June 1976 documented improved conditions, although it indicated continued concerns regarding adequacy of cover and an observation of the leachate in the northeastern corner of the Site. On September 30, 1980, a site inspection was performed by the U.S. EPA. During the inspection, leachate was reportedly observed to be entering the Black River at the northeastern corner of the Site. The analytical results (dated October 20, 1980) for both one leachate sample and one sediment sample collected from observed seepage points located between the northeastern toe of the landfill and the Black River showed detectable concentrations of ammonia, lead, boron, cadmium, zinc, barium, chromium, titanium, tetrahydrofuran, dimethylbenzene, ethylbenzene, 3,3,5-trimethylcyclohexanone, trimethylcyclohexanol, 1, oxybisbenzene, ethylenebisbenzene, and bis(2-ethylhexyl)phthalate. The sediment sampled contained bis(2-ethylhexyl)phthalate, phenol, methylphenol, 1H-Indole, tetradecanediols, and polychlorinated biphenyls (PCBs).

An Evaluation of the Potential for Groundwater Contamination at the Ford Road Site was prepared by a U.S. EPA contractor, Ecology & Environment, Inc. (E&E), on behalf of the U.S. EPA, dated October 16, 1981. This evaluation concluded that impacts to the deeper bedrock aquifer were unlikely due to the relatively impermeable shale cap rock. In addition, the evaluation determined that potential impacts to groundwater in the overburden could impact the Black River and should be evaluated by installing and sampling four to five wells. On August 23 and 24, 1982, three shallow overburden monitoring wells (MW-1, MW-2, and MW-3) were drilled and installed by ATEC Environmental Consultants. One borehole was also advanced upgradient of the site; however, no groundwater was encountered above the shale bedrock and no monitoring wells were installed at this location.

A preliminary assessment of the Ford Road Landfill was prepared by E&E on behalf of the U.S. EPA, dated January 5, 1983. Based on an evaluation of available information from the field investigation team files, Ohio EPA files, and U.S. EPA Region 5 files, additional information was considered necessary to assess potential impacts to groundwater, surface water, and/or soil. On July 20, 1983, during a site inspection, E&E collected groundwater samples from each of the three existing monitoring wells at the Site on behalf of the U.S. EPA. Two of the samples were found to contain low concentrations of acetone and alphanaphthalene hexachloride. A third sample contained methylene chloride.

On January 10, 1994, a U.S. EPA contractor, PRC Environmental Management, Inc. (PRC) submitted the *Expanded Site Inspection Report*. The activities completed by PRC included an

inspection of the site on March 8, 1993, during which a leachate seep was observed flowing toward the Black River near the northeastern corner of the Site. On May 18, 1993, PRC sampled soil, surface water, sediment, and groundwater at the Site. PCB (Aroclor-1254), delta-BHC, alpha chlordane, calcium, lead, and zinc were detected in one or more sediment samples. No hazardous substances were identified at levels above background in surface water samples. Also, 1,1-dichloroethene, potassium, and sodium were detected in one or more of the groundwater samples. Naturally occurring metals, arsenic, barium, manganese, and nickel were also detected at elevated concentrations in both sediment and groundwater.

Browning-Ferris Industries of Ohio conducted monthly methane gas monitoring from February 8, 1989 through January 31, 1994. This monitoring program involved monitoring for methane gas at 10 locations across the landfill during each monitoring event. The monitoring results showed 0% of the lower explosive limit and 0% by volume from all locations during each monitoring event implemented. A landfill gas monitoring system was formally approved by Ohio EPA in early 2006 and sampling results have shown that no landfill gas is migrating through the existing cap.

In 1980, with the approval of the U.S. EPA and the Park District, Browning-Ferris of Ohio implemented a voluntary response action involving the addition and grading of cover soil (including placing up to 7.5 feet of low-permeability cover materials) to intercept and contain reported observations of leachate emanating from the Site. In addition, some refuse observed near the Black River was removed and transported to the Lorain County Landfill.

Ohio EPA has collected fish tissue data in the Black River as part of its state program. Currently, the Black River has a fish advisory for Common Carp for PCBs and a PCB and mercury advisory for Freshwater Drum.

In a small area near the northeast corner of the landfill, a thin floating layer of motor oil or light non-aqueous phase liquid (LNAPL) was detected in monitor wells during the RI/FS. Aroclor 1242 and Aroclor 1254 are present at elevated concentrations in the LNAPL. However, through sediment sampling and the observation of black stained soil along the bank of the river adjacent to the Site conducted during the Remedial Investigation (RI) at Ford Road Landfill, it appears that a small amount of PCB contamination associated with the LNAPL may be entering into the Black River and could pose a risk to the ecological community residing in the River. Fish tissue samples were not collected as part of the RI.

Other potential hazards at the site that were identified during this assessment included the physical hazards present along the steep side slopes of the landfill. The Site was and still remains unfenced providing easy access to the Site. Crushed drums and exposed waste found along the northern and southern edges of the landfill posed a potential physical threat to anyone venturing on the sides of the landfill. There were also several areas of exposed ash found during the assessment that were of unknown origin and could have possibly contained constituents in concentrations above regulatory levels, posing a potential health threat to those who came into contact with this area.

In July 2002, an Administrative Order on Consent (AOC) was signed, among others, by Browning-Ferris Industries of Ohio, Goodrich Corporation, Ford Motor Company, General Motors Corporation, Chevron Environmental Management Company & Kewanee Industries Incorporated (a.k.a. the Ford Road Group) and U.S. EPA, which required the Ford Road Group to conduct a Remedial Investigation/Feasibility Study (RI/FS). The RI/FS work was conducted by the Ford Road Group under the terms of the 2002 AOC, with oversight by U.S. EPA and Ohio EPA. This work was completed and the ROD was signed in September 2006.

Extent of Contaminants and Source Areas

Based on the RI and Screening Level Risk Assessment, the chemicals of potential concern (COPCs) for human health at the Site are:

- For soil and sediment, the COPCs are polynuclear aromatic hydrocarbons (PAHs), PCBs, and metals.
- For surface water the COPCs are one semivolatile organic compound (SVOC) (bis [2-ethylhexyl] phthalate) and five metals (aluminum, antimony, arsenic, iron, and thallium).
- For groundwater, the COPCs are two volatile organic compounds (VOCs) (benzene and vinyl chloride), one SVOC (bis [2-ethylhexyl] phthalate), PCBs, and several metals.
- For leachate, the COPCs are two VOCs (benzene and chloroform), one SVOC (bis [2-ethylhexyl] phthalate), three pesticides (beta-BHC, dieldrin, and heptachlor), and several metals.

For the screening-level Ecological Risk Assessment (ERA), the COPCs identified for the Site includes PAHs, PCBs/pesticides, and inorganics for soil, sediment, surface water, and leachate. The highest potential ecological risks associated with the Site are likely to be in association with elevated metals in the soils around the slope of the landfill. Potential risks associated with leachate, surface water, and sediment are expected to be relatively low, with the exception of sediment in the vicinity of where the intermittent stream flows into the Black River.

Description of the Selected Remedy

Two alternatives were selected to address the contamination at the Site:

Alternative 3: In Situ Containment with Surface Cover Enhancement

- This alternative would involve implementing the measures outlined under Alternative 2 of the ROD (e.g., monitoring and institutional controls) in conjunction with the focused removal of waste on the side slopes and enhancement of the existing surface cover over the landfill, as appropriate.
- The enhancement of the landfill cover would involve site grading to improve surface water control and the placement of additional low-permeability material over those areas of the landfill that do not currently meet the requirement that a minimum 2-foot

cover exists over the subject area. As per Ohio EPA DSIWM Guidance Document No. 0123: Construction of a 1976 Cap System (1995) the testing specifications for the cover material will include: moisture/density relationship; moisture content range; permeability; and grain size analysis. The construction specifications will include: compaction to at least 95% of the maximum Standard Proctor Density (ASTM D-698) or 90% of the maximum Modified Proctor Density (ASTM D-1557); compaction using loose lifts, no greater than eight (8) inches thick prior to compaction; and monitoring of compaction.

- Widely scattered cascaded waste was encountered over an approximately 5,000 square foot area on the north slope of the landfill and an approximately 15,000 square foot area on the south slope of the landfill, both outside the limits of waste. Alternative 3 will address this waste by consolidation within the existing or extended limits of the landfill or disposal at a licensed facility, if this material is shown to be a hazardous waste. In the FS, it was assumed that a limited amount of the material may require offsite disposal and most of the material will be consolidated within the limits of the landfill. It is expected that material consolidated within the limits of waste will be placed in lifts and compacted in areas on the top of the landfill after the existing cover has been stripped for reuse, however, the exact method will be determined as part of the Remedial Design. Surficial wastes will be removed as necessary to meet regulatory limits. Backfill would only be expected to be placed in these areas, as required, to result in appropriate stable slopes beyond the limits of the landfill, depending on the final grade.
- The possibility of slope modifications will also be addressed under Alternative 3. Currently, most areas of the landfill have side slopes in the range of 1.25-1.5:1 horizontal: vertical ratio and are not imminently unstable. The proposed modifications to the existing cap, though, may affect the stability of the side slopes. It is believed that the northern slope, southern slope, the northern portion of the eastern side slope, and approximately half of the southern portion of the eastern side slope (approximately 73,000 square feet, total) may require stabilization. Should it be found during the Remedial Design that further modifications are required to maintain slope stability during and after cap modifications, possible response actions will be evaluated.
- Upon completion of the cover enhancements and other components of Alternative 3, the presence of a continuous 2-foot cover over the entire landfill surface will serve to significantly reduce potential exposure to impacted media and migration of COPCs by reducing the volume of precipitation that infiltrates through the landfill.

Alternative A. Select Removal of Specifically Identified Areas Outside of Landfill Limits

This alternative would involve the removal of selected soil/sediment observed to contain COPCs that exceed Site-specific risk based concentration levels (RBCs) outside of the landfill limits in the northeast corner of the Site. The removal depth is estimated to be approximately fifteen feet. It is expected that the focus of this excavation would begin at the location along the edge of the

river where evidence of LNAPL migration was observed (e.g., the thin sand unit exhibiting trace sheen). The excavation would remove the impacted sediment at the edge of the river then extend back toward the toe of the landfill slope, removing impacted soil that represents the likely preferential migration pathway along which the LNAPL impacts may have migrated toward the edge of the river. It is conservatively estimated that up to 6,400 cubic yards of soil and sediment will be removed, although the actual removal sequence, limits and depth will be determined during the Remedial Design stage. To the degree practicable, non-impacted surface soil would be removed, stockpiled, and characterized, which could significantly reduce the volume of soil requiring disposal. Excavated materials that do not contain levels of PCBs requiring off-site disposal or management under TSCA, or other hazardous components, would be used either in construction of landfill cover improvements or placed under the cap within the landfill. Soils and sediment containing constituents with levels exceeding regulatory limits will be sent offsite for disposal. The excavated areas would be backfilled, as required to establish surface contours, with clean, compacted, low permeability soil and re-vegetated. A reducing media that can fully degrade any residual levels of COPCs may be used as or added to the backfill if necessary.

Estimated Remedy Costs

Present Worth \$3,400,000

II. DESCRIPTION OF THE REMEDIAL ACTION / PERFORMANCE STANDARDS

The Settling Defendants shall design and implement the Remedial Action to meet the performance standards and specifications set forth in the ROD and this SOW. Performance standards shall include cleanup standards, standards of control, quality criteria and other substantive requirements, criteria or limitations including all Applicable or Relevant and Appropriate Requirements (ARARs) set forth in the ROD, SOW and/or Consent Decree (CD).

1. Excavation of PCB-contaminated soil/sediment

The Settling Defendants shall determine the horizontal and vertical extent of the PCB contaminated area located in the northeastern corner of the Site. The Settling Defendants may rely on existing site data gathered during the RI/FS in determining the extent of contamination. The excavation along the northeastern side of the landfill shall be extensive enough to create an adequate buffer zone to ensure that, for the lifetime of the remedy, there is no direct contact between the PCB-contaminated wastes or LNAPL within the existing landfill and the Black River. This buffer zone shall be of sufficient size to allow for the installation of and access to groundwater monitoring wells if it is determined that additional wells are needed. The excavation would remove the impacted sediment at the edge of the river then extend back toward the toe of the landfill slope, removing impacted soil/sediment that appears to represent the preferential migration pathway along which the LNAPL impacts may have migrated toward the edge of the river.

The Settling Defendants shall submit a Remedial Action (RA) Work Plan to U.S. EPA for review and approval prior to initiating any excavation activity. The RA Work Plan shall be based on the approved Final Design and shall include air and surface water monitoring provisions as

determined necessary by U.S. EPA. Subsequent to work plan approval, all excavated material will be dewatered as necessary. To the degree practicable, non-impacted surface soil would be removed, stockpiled, and characterized, which could significantly reduce the volume of soil requiring disposal. Soil/sediment that is found to be hazardous will be shipped to an appropriate licensed facility. Soil/sediment that is not hazardous but has contaminant levels above RBCs will be placed into the existing landfill. Soil/sediment that has contaminant levels below RBCs can be used in the construction of the landfill cover. This soil and sediment area will have to meet each COPC's respective RBC for both soil and sediment and the threshold effect concentration (TEC) for any sediment ecological contaminants of potential concern (ECOPCs) (See Tables 4, 5, 6 and 7 in the ROD for RBCs). Soil erosion shall be controlled compliant with state law during remedy implementation.

Current stream bank inspections downgradient of the northeastern corner of the landfill do not show any evidence of the black staining where contaminant seepage occurred. Confirmatory soil sampling will be performed if any evidence of this is observed at any time. This will protect and help restore riverine resources to their highest beneficial use and serve to eliminate any risks to human and wildlife population.

2. Cap

The Settling Defendants will comply with the ROD by conducting a focused relocation and consolidation of wastes outside the footprint of the landfill and then re-grading to improve surface water control, as needed, over the extent of the landfill and the placement of additional low-permeability material over those areas of the landfill that do not currently meet the minimum 2-foot landfill cap system cover requirement of Ohio EPA [Ohio EPA - DSIWM Guidance #0123 OAC 3745-27-09(F)]. The focused waste relocation activities would concentrate on the areas outside the limits of the landfill footprint on the north and south slopes where waste material (including large waste objects such as white goods, drum carcasses, etc) are exposed at the surface. Waste materials along the side slopes that are not suitable for compaction *in situ*, will be relocated to other areas of the landfill and relocated within the landfill cap. The areas requiring enhancement of the existing cover are primarily on the northern and southern slopes of the landfill. Landfill waste that has, over time, cascaded over the sides of the landfill and remains exposed will be consolidated within the existing or extended limits of the landfill. Vegetation will need to be removed to accomplish the cover enhancements along the landfill slopes. This will involve removing any vegetation within the landfill footprint itself and ensuring that trees and shrubs remaining close to the landfill footprint will not compromise the new landfill cover. Actions to maintain stable slopes will also be performed (e.g., appropriate replacement vegetation and/or slope stabilizing controls). The landfill will then be revegetated in a manner that healthy grasses or other vegetation will form complete and dense vegetative cover within one year of placement.

Modifications to the existing cap may affect the stability of the side slopes of the landfill. It appears that the North End Slope, Southern End Slope, the northern portion of the Eastern Side Slope, and approximately half of the southern portion of the Eastern Side Slope (approximately 73,000 square feet, total) may require stabilization. However, the exact extent will be based on evaluations made as part of the Remedial Design phase.

A detailed analysis of the slope stability will be conducted during the Remedial Design phase. A plan specifying requirements of the slope stability analysis will be prepared as part of the Remedial Action Work Plan and submitted to U.S. EPA and Ohio EPA for review and approval. The plan will be developed considering applicable sections of the following guidance: Geotechnical and Stability Analyses for Ohio Waste Containment Facilities (GeoRG) Manual 660 and can be found at http://www.epa.state.oh.us/dsiwm/pages/alpha_e-h.html. The slope stability study will include a review of historical data and information, and data collected as part of the RI/FS, and will provide all key parameters necessary to perform a geotechnical assessment of slope stability, including the nature and strength of soils and waste and piezometric levels. The slope stability investigation and methods of analysis will be specified in the Remedial Design Work Plan. Should this analysis show that further modifications are required to maintain slope stability during and after cap modifications, possible response actions will be evaluated as part of the Remedial Design phase. It is assumed that excavated materials from potential slope modification would be placed under the enhanced cap. To the extent possible, all waste materials will be managed on-site, however, it is possible that part of this material may need to be disposed of at an appropriately licensed offsite facility.

Upon completion of cover enhancements and removal of exposed wastes and, if necessary, side slope modifications, a continuous 2-foot cover or an equally protective cover approved by the U.S. EPA will be placed over the entire landfill where two feet of adequate cover is lacking. This enhanced cover over the entire landfill will reliably contain the landfill wastes and reduce the infiltration of water through the landfill and thereby reduce the potential for groundwater impacts that could ultimately migrate to the Black River.

For groundwater monitoring, analytical results will be summarized and compared with Ohio's Water Quality Standards, Lake Erie Basin, in Ohio Administrative Code Chapter 3745-1 Outside Mixing Zone Average for Aquatic Life. This comparison will also be performed for any COPCs identified when sampling the leachate seeps at the Site.

Periodic leachate sampling will occur at the areas staked during the RI (USACE Stakes). If these areas become regraded or altered during construction activities, periodic checks of potential seeps will be conducted to ensure that no seepage is occurring.

The existing landfill gas monitoring system will be operated and maintained and all appropriate state requirements will be met for the life of the Site.

Once the remedy has been implemented, the areas on the landfill footprint that had existing grasses, plants and trees will be revegetated with appropriate vegetation that will not compromise the new landfill cover. The areas within the Site, but not within the footprint of the new landfill that had a limited amount of vegetation removed (due to construction traffic, soil management areas, etc) during the implementation of the remedy will be revegetated with grass as approved by the U.S. EPA.

The Settling Defendants shall submit a RA Work Plan to U.S. EPA for review and approval prior to initiating any activity associated with the landfill cover enhancement. The RA Work Plan shall

be based on the approved Final Design and shall include air and surface water monitoring provisions as determined necessary by U.S. EPA.

3. Surface Water Management System

The Settling Defendants shall develop a surface water plan which will be approved by U.S. EPA. Various models will be used to ensure that the system is fully functioning and reducing the infiltration of water through the landfill. A site water-balance model, using U.S. EPA's H.E.L.P modeling, or similar software, will be compiled after the remedy is in place to ensure that the cap installation was done properly and is functioning as intended.

4. Short-Term and Long-Term Monitoring

The Settling Defendants shall perform short-term surface water monitoring during all construction and excavation activities that may have an impact on surface water. Surface water monitoring shall be conducted in order to assure that public health, safety, welfare, and the environment are being protected in accordance with state and federal law during implementation of excavation activities.

During construction activities, the Settling Defendants shall perform air monitoring, as necessary. Air monitoring will ensure that the RA activities do not violate the rules prohibiting the emission of air contaminants in quantities which have injurious effects on human health, animal life, plant life of significant economic value, and/or property.

The Settling Defendants shall perform long-term groundwater monitoring following construction of the remedy. The long-term groundwater monitoring may require the installation of additional monitoring wells or abandonment of existing wells that are no longer necessary. The number and location of ground water monitoring wells shall be specified by the Settling Defendants in the Remedial Design and is subject to U.S. EPA approval, in consultation with the State.

For groundwater monitoring, analytical results will be summarized and each COPC identified in the ROD will be compared with Ohio's Water Quality Standards, Lake Erie Basin, in Ohio Administrative Code Chapter 3745-1 Outside Mixing Zone Average for Aquatic Life. This comparison will also be performed for any COPCs identified when sampling the leachate seeps at the Site.

The groundwater from each monitoring well shall be sampled and analyzed by the Settling Defendants as described below, unless modified in the approved Final Operation & Maintenance (O&M) Plan:

Wells FR-MW-3, FR-MW-4, and FR-MW-6 will be sampled annually for five years for metals and VOCs. Wells FR-MW-1, FR-MW-7, and FR-MW-8 will be sampled quarterly for two years and semiannually for the following three years for Target Compound List (TCL) volatile organic compounds (VOCs), TCL semivolatile organic compounds (SVOCs), and Target Analysis List (TAL) metals. Once the initial five year period is complete and if all contaminant levels are found to be below risk levels, wells FR-MW-1, FR-MW-6, FR-MW-7, and FR-MW-8 will be

sampled annually for an additional 10 years. A full O&M plan will be developed after completion of the Remedial Design phase to incorporate any additional sampling that will be required and approved by the U.S. EPA and Ohio EPA.

5. Fencing and Signage

Currently, adverse impacts to human health are classified by U.S. EPA as not under control at the Site due to the ability for trespassers or others to directly enter the Site and come into contact with contaminated media. For example, evidence of fishing has been noted at the Site in the area where the PCB-impacted soil is located. Therefore, it is necessary to attempt to prevent access to the Site prior to the implementation of the remedial action. In order to do this, the Settling Defendants shall develop a plan to address exposure in the area between the landfill slope and the river where organic constituents were found during the RI/FS. The plan will address the methods that will be used to limit exposure where soil and surface water contamination above action levels has been documented within two-feet of the ground surface. For these areas of the site, the plan will specify methods that will be used to limit exposure, which may include fencing, but will also consider other options such as additional soil cover, the use of rip-rap, and other types of barriers to exposure. The required plan will be submitted to U.S. EPA within 120 days after receiving the Notice of Authorization to proceed with RD. Any type of protection that is installed will be maintained until those areas have been remediated.

In addition, during the remedial action, Settling Defendants will install appropriate fencing around areas where construction activities are taking place to ensure that trespassers are warned of hazards within the construction area.

6. Institutional Controls

For Ford Road Landfill, institutional controls will be needed since the Site will have contaminants remaining at levels that do not allow unrestricted use or unlimited access. The goal of these institutional controls is to prevent direct contact exposure with the residual contamination. Therefore, digging or disturbance of the cover (or underlying contaminated material) will be prevented (or if needed, repairs will be made). There will be a program of Operation & Maintenance and monitoring, and this will include routine inspection of the cover and require any necessary repairs to the cover. Institutional controls will be developed through a layered approach, including: proprietary controls (easements and/or covenants including environmental covenants pursuant to Sections 5301.80 to 5301.92 of the Ohio Revised Code); deed restrictions; and enforcement tools (AOCs and/or consent decrees), which will ensure the long-term reliability of the controls. The development of these institutional controls will be completed as specified in the Consent Decree, with the input of U.S. EPA and Ohio EPA.

7. Long-term Maintenance

Long-term maintenance and post-closure care will be performed by the Settling Defendants as required by applicable federal and state regulations and as described in the Consent Decree. A detailed O&M Plan shall be submitted as part of this RD. Once approved, the Long-term O & M shall be carried out pursuant to the plan.

8. Other Provisions

Measures will be taken during remedy construction activities to minimize the noise and dust impacts of construction upon the surrounding community. Fugitive dust emissions will be monitored and controlled in a manner to ensure that they comply with all appropriate state and federal regulations.

III. SCOPE OF REMEDIAL DESIGN AND REMEDIAL ACTION

The Remedial Design/Remedial Action shall consist of six tasks. All plans are subject to U.S. EPA approval.

Task 1: Remedial Design Work Plan

The Settling Defendants shall submit a Work Plan which shall document the overall management strategy for performing the design, construction, operation, maintenance and monitoring of Remedial Actions for U.S. EPA review and approval. The plan shall document the responsibility and authority of all organizations and key personnel involved with the implementation and shall include a description of qualifications of key personnel directing the Remedial Design, including contractor personnel. The Work Plan shall also contain a schedule of Remedial Design activities.

The Settling Defendants shall submit a Remedial Design Work Plan in accordance with Section VI, Paragraph 11 of the Consent Decree. The RD Work Plan shall include a project schedule for each major activity and submission of deliverables generated during the Remedial Design. This RD Work Plan shall include, at a minimum, a pre-design Quality Assurance Project Plan (QAPP), Health and Safety Plan, and a Field Sampling Plan.

The Settling Defendants shall implement the pre-design work in accordance with the final RD Work Plan. The results of the pre-design studies shall be included with the Preliminary Design.

Task 2: Remedial Design Phases

The Settling Defendants shall prepare construction plans and specifications to implement the Remedial Actions at the Ford Road Industrial Landfill as described in the ROD and this SOW. Plans and specifications shall be submitted in accordance with the schedule set forth in Section V of this SOW. Subject to approval by U.S. EPA, the Settling Defendants may submit more than one set of design submittals reflecting different components of the Remedial Action. All plans and specifications shall be developed in accordance with U.S. EPA's Superfund Remedial Design and Remedial Action Guidance (OSWER Directive No. 9355.0-4A) and shall demonstrate that the Remedial Action shall meet all objectives of the ROD, the CD and this SOW, including all Performance Standards. U.S. EPA's Project Coordinator and the Settling Defendant's Project Coordinator will meet in person or via conference call, at a minimum, on a bi-monthly basis, unless U.S. EPA's Project Coordinator and the Settling Defendants' Project Coordinator mutually agree to meet on a greater or less frequent basis.

A. Preliminary Design

The Settling Defendants shall submit the Preliminary Design when the design effort is approximately 50% complete. Prior to submittal of the 50% design, U.S. EPA and the Settling Defendants shall schedule design review and progress meetings to discuss progress on the design. If required by the approved RD Work Plan, the Preliminary Design submittal shall include or discuss, at a minimum, the following:

- design criteria;
- results of treatability studies;
- results of additional field sampling and pre-design work;
- project delivery strategy;
- preliminary plans, drawings and sketches;
- required specifications in outline form;
- preliminary construction schedule;
- proposed cleanup verification methods, including compliance with Applicable or Relevant and Appropriate Requirements (ARARs);
- proposed citing/locations or processes/construction activities;
- real estate, easement, restrictive covenant, and permit requirements; and,
- QAPP/Health and Safety Plan/Field Sampling Plan/Contingency Plan.

B. Intermediate Design

The Intermediate Design, if required by U.S. EPA or if independently submitted by the Settling Defendants, shall be a continuation and expansion of the preliminary design. Any value engineering proposals must be identified and evaluated during this review.

C. Prefinal and Final Designs

The Settling Defendants shall submit the Prefinal Design when the design effort is 95% complete and shall submit the Final Design when the design effort is 100% complete. The Prefinal Design shall fully address all U.S. EPA comments made to the preceding design submittal. The Final Design shall fully address all of U.S. EPA comments made to the Prefinal Design and shall include reproducible drawings and specifications suitable for bid advertisement.

The Prefinal Design shall serve as the Final Design if U.S. EPA has no further comments and issues the notice to proceed.

Unless otherwise directed by U.S. EPA in the approved RD Work Plan, the Prefinal and Final Design submittals shall include, at a minimum, those elements listed for the Preliminary Design, as well as the following:

- Final plans and specifications;
- Draft Operation and Maintenance Plan;
- Construction Quality Assurance Project Plan (CQAPP). The CQAPP, which shall detail the approach to quality assurance during construction activities at the Site,

- shall also specify a quality assurance official (QA Official) to conduct a quality assurance program during the construction phase of the project;
- Contingency Plan; and
- Performance Standards Verification Plan. The PSVP shall explain in detail which mechanisms will ensure that the RA achieves the overall Remedial Action Objectives (RAOs) developed and defined in the ROD, including those RAOs that are not based upon concentration levels of hazardous substances. The PSVP shall include provisions for confirmation sampling as needed.

Task 3: Remedial Action Work Plan

The Settling Defendants shall submit a Remedial Action Work Plan which includes a detailed description of the remediation and construction activities. The RA Work Plan shall list the major deliverables and include a project schedule for each major activity and submission of deliverables generated during the Remedial Action. The Settling Defendants shall submit a Remedial Action Work Plan in accordance with Section VI, Paragraph 12 of the Consent Decree and Section V of this SOW.

Task 4: Remedial Action Construction

The Settling Defendants shall implement the Remedial Action as detailed in the approved Final Design. The following activities shall be completed in constructing the Remedial Action.

A. Pre-construction inspection and meeting

Unless not required by U.S. EPA, the Settling Defendants shall participate with the U.S. EPA and the State in a preconstruction inspection and meeting to:

- a. Review methods for documenting and reporting inspection data;
- b. Review methods for distributing and storing documents and reports;
- c. Review work area security and safety protocol;
- d. Discuss any appropriate modifications of the construction quality assurance plan to ensure that site-specific considerations are addressed; and,
- e. Conduct a Site walk-around to verify that the design criteria, plans, and specifications are understood and to review material and equipment storage locations.

The pre-construction inspection and meeting shall be documented by a designated person and minutes shall be transmitted to all parties.

B. Final Construction Completion Inspection

As approved by U.S. EPA in the RA construction schedule included in the RA Work Plan, after the Settling Defendants make a preliminary determination that the Site construction is complete (i.e., all remedial action construction activity is complete and long-term O&M and post closure care is ready to commence), the Settling Defendants shall notify the U.S. EPA and the State for the purposes of conducting a prefinal construction completion inspection. The prefinal

construction completion inspection shall consist of a walk-through inspection of the entire Site with U.S. EPA and Ohio EPA. The inspection is to determine whether the construction is complete and consistent with the contract documents. Any outstanding construction items discovered during the inspection shall be identified and noted in a Prefinal Inspection Report, which shall be delivered to U.S. EPA within 15 days of the prefinal RA construction completion inspection. This report shall summarize the prefinal construction completion activities, outline the outstanding items, actions required to resolve the items, completion date for the items, and an anticipated date for the final inspection.

Within 30 days of U.S. EPA's approval of the Prefinal Inspection Report, the Settling Defendants shall initiate any construction activity or other work identified in that document as required to be completed. Within 90 days after completion of any work identified in the Prefinal Inspection Completion Report, the Settling Defendants shall notify the U.S. EPA and the State for the purposes of conducting a final construction completion inspection. The final inspection shall consist of a walk-through inspection of the Site by U.S. EPA, Ohio EPA and the Settling Defendants. The Prefinal Inspection Report shall be used as a checklist with the final inspection focusing on the outstanding construction items identified in the Prefinal Inspection Report. Confirmation shall be made that outstanding items have been resolved. If any items are unresolved, the inspection shall be considered to be a Prefinal Construction Inspection requiring another Prefinal Construction Completion Inspection Report and subsequent Final Construction Completion Inspection. Subsequent to a successful final construction completion inspection and within the time period set forth in the approved RA Work Plan, the Settling Defendants shall submit a Certification of Completion of Construction Report, which shall contain a certification by a professional engineer that the construction has been completed consistent with the contract documents and the Remedial Action. Thereafter, and in accordance with the schedule in the approved RA Work Plan, U.S. EPA will issue a Certification of Completion of Construction.

C. Pre-certification of Site Remedial Action Inspection

In accordance with Paragraph 53a of the Consent Decree, within 90 days after the Settling Defendants conclude that all phases of the Remedial Action have been fully performed and the Performance Standards (as defined in the approved RA and Performance Standard Verification Plan) have been attained, the Settling Defendants shall schedule and conduct a pre-certification inspection of the Remedial Action to be attended by the Settling Defendants, U.S. EPA and Ohio EPA. If, after the pre-certification inspection, the Settling Defendants still believe that the Remedial Action has been fully performed and the applicable Performance Standards have been attained, the Settling Defendants shall submit a Certification of Completion of the RA Report, requesting certification to U.S. EPA for approval, with a copy to Ohio EPA, pursuant to Section XIV of the Consent Decree within 30 days of the inspection. In the report a professional engineer and the Settling Defendant's Project Coordinator shall state the construction of the Remedial Action has been completed in full satisfaction of the requirements of the Consent Decree. The written report shall include a certification statement and signatures identified in Paragraph 53a of the CD and described in Section III, Task 4, Part E, Paragraph 3 of this SOW below. Subsequent requests for certifications, inspections, and reports shall also be in accordance with the terms of Section XI of the Consent Decree.

D. Completion of Site Work

In accordance with Paragraph 54 of the Consent Decree, within 90 days after the Settling Defendants conclude that all phases of the Site Work have been fully performed, the Settling Defendants shall schedule and conduct pre-certification inspection of the Site Work pursuant to Section XIV, Paragraph 54a of the Consent Decree, to be attended by the Settling Defendants, U.S. EPA, and Ohio EPA. If, after the pre-certification inspection, the Settling Defendants still believe that the Site Work has been fully performed, the Settling Defendants shall submit a written report (Completion of Work Report) by a registered professional engineer stating that the Site Work has been completed in full satisfaction of the requirements of the Consent Decree. The written report shall contain the certification statement and signatures identified in Paragraph 54a of the CD and described in Section III, Task 4, Part E, and Paragraph 4. If, after review of the written report, U.S. EPA, after reasonable opportunity to review and comment by Ohio EPA, determines any portion of the Site Work has not been completed in accordance with the Consent Decree, U.S. EPA will notify the Settling Defendants in writing of the activities that must be undertaken by the Settling Defendants pursuant to the Consent Decree to complete the Site Work, provided, however, that U.S. EPA may only require the Settling Defendants to perform such activities pursuant to Sections VI, VII, VIII and XIV of the Consent Decree to the extent that such activities are consistent with the scope of the remedy selected in the ROD. U.S. EPA will set forth in the notice a schedule for performance of such activities consistent with the Consent Decree and the SOW or require the Settling Defendants to submit a schedule to U.S. EPA for approval pursuant to Sections VI, VIII of the Consent Decree. The Settling Defendants shall perform all activities described in the notice in accordance with the specifications and schedules therein, subject to its right to invoke the dispute resolution procedures set forth in Section XIX of the Consent Decree.

If U.S. EPA concludes, based on the initial or any subsequent request for Certification of Completion of the Site Work by the Settling Defendants and after a reasonable opportunity for review and comment by Ohio EPA, that the Site Work has been performed in accordance with the Consent Decree, EPA will so notify the Settling Defendants in writing.

E. Reports

1. Progress Reports

As described in the Consent Decree, unless otherwise required on a less frequent basis by U.S. EPA, the Settling Defendants shall submit to U.S. EPA monthly progress reports during construction and quarterly reports during other activities delineating the status of the Site. The progress reports shall include:

- a. Activities conducted during the period and results of data collection activities;
- b. Problems encountered during the period;
- c. Schedule variances and corrective actions, if necessary; and
- d. Projected Activities for the next six to twelve week period.

2. Certification of Completion of Construction Report

Within the time frame provided in the approved RA Work Plan, the Settling Defendants shall submit a Certification of Completion of Construction Report. In the report, a registered professional engineer and the Settling Defendant's Project Coordinator shall state that the Remedial Action has been constructed in accordance with the design and specifications. The report shall include the following items, as necessary:

- Brief description of how outstanding items noted in the Pre-final Construction Completion Inspection were resolved;
- Explanation of modifications made during the RA to the approved RD and RA Work Plans and why these changes were made;
- As-built drawings; and
- Synopsis of the construction work defined in the SOW and certification that the construction work has been completed.

Within the time period provided in the approved RA Work Plan and subsequent to U.S. EPA's approval of the Certification of Completion of Construction Report, U.S. EPA will issue to the Settling Defendants a Certification of Completion of Construction.

3. Certification of Completion of the RA Report

The Certification of Completion of the RA Report, provided for in Paragraph 53 of the CD, shall include the following items, as necessary:

- Synopsis of the work defined in the SOW and a demonstration in accordance with the Performance Standards Verification Plan and Performance Standards have been achieved;
- Certification that the Remedial Action has been completed in full satisfaction of the requirements of the Consent Decree; and
- A description of how the Settling Defendants will implement any remaining part of the U.S. EPA approved Operation and Maintenance Plan.

The written report shall identify any performance standards that have not been met as of the date of the report, and shall include as-built drawings signed and stamped by a professional engineer. The report shall contain the following statement, signed by a responsible corporate official of the Settling Defendants or the Settling Defendant's Project Coordinator:

"To the best of my knowledge, after thorough investigation, I certify that the information contained in or accompanying this submission is true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

4. Completion of Work Report

In the Certification of Completion of Work Report, provided for in Paragraph 54 of the Consent Decree a registered professional engineer and the Settling Defendant's Project Coordinator shall state the Work has been completed in full satisfaction of the requirements of the Consent Decree. The written report shall contain the following statement, signed by a responsible corporate official of the Settling Defendants or the Settling Defendant's Project Coordinator:

"To the best of my knowledge, after thorough investigation, I certify that the information contained in or accompanying this submission is true, accurate and complete. I am aware there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations."

Task 5: Operation and Maintenance

The Settling Defendants shall prepare an Operation and Maintenance (O&M) Plan to cover both implementation and long term maintenance of the Remedial Action. An initial Draft O&M Plan shall be submitted as a final Design Document submission. The Final O&M Plan shall be submitted to U.S. EPA in accordance with the construction schedule contained in the approved RA Work Plan. The plan shall comprise the following elements as may be applicable to the Site:

1. Description of normal maintenance:
 - a. Description of tasks for operation;
 - b. Description of tasks for maintenance;
 - c. Description of prescribed treatment or operation conditions; and
 - d. Schedule showing frequency of each O&M task.
2. Description of potential operating problems:
 - a. Description and analysis of potential operation problems;
 - b. Sources of information regarding problems; and
 - c. Common and/or anticipated remedies.
3. Description of routine monitoring and laboratory testing:
 - a. Description of monitoring tasks;
 - b. Description of required data collection, laboratory tests and their interpretation;
 - c. Required quality assurance, and quality control ;
 - d. Schedule of monitoring frequency and procedures for a petition to U.S. EPA to reduce the frequency of maintenance or to discontinue it; and
 - e. Description of verification sampling procedures if Cleanup or Performance Standards are exceeded in routine monitoring.

4. Description of alternate O&M:
 - a. Should systems fail, alternate procedures to prevent release or threatened releases of hazardous substances, pollutants or contaminants which may endanger public health and the environment or exceed performance standards; and
 - b. Analysis of vulnerability and additional resource requirement should a failure occur.
5. Corrective Action:
 - a. Description of corrective action to be implemented in the event that cleanup or performance standards are exceeded; and
 - b. Schedule for implementing these corrective actions.
6. Safety plan:
 - a. Description of precautions, of necessary equipment, etc., for Site personnel; and
 - b. Safety tasks required in event of systems failure.
7. Description of equipment:
 - a. Equipment identification;
 - b. Installation of monitoring components;
 - c. Maintenance of Site equipment; and
 - d. Replacement schedule for equipment and installed components.
8. Records and reporting mechanisms required:
 - a. Daily operating logs;
 - b. Records for operating costs;
 - c. Mechanism for reporting emergencies; and
 - d. Personnel and maintenance records.

Task 6: Performance Monitoring

Performance Monitoring shall be conducted by the Settling Defendants for 15 years following the issuance of the Certification of Completion of Work Report, according to a Performance Standard Verification Plan to ensure that all Performance Standards are met.

The purpose of the Performance Standard Verification Plan is to provide a mechanism to ensure that both short-term and long-term Performance Standards for the Remedial Action are met. The Draft Performance Standards Verification Plan shall be submitted with the Prefinal Design.

Once approved, the Performance Standards Verification Plan shall be implemented on the approved schedule. The Performance Standards Verification Plan shall include:

1. Quality Assurance Project Plan;

2. Health and Safety Plan;
3. Field Sampling Plan; and
4. Specification of those tasks to be performed by the Setting Defendant(s) to demonstrate compliance with the Performance Standards and a schedule for the performance of these tasks.

IV. CONTENT OF SUPPORTING PLANS

The documents listed in this section, the Quality Assurance Project Plan, the Field Sampling Plan, the Health and Safety Plan, the Contingency Plan, the Construction Quality Assurance Plan, the Technical Assistance Plan and the Oversight Plan are documents which must be prepared and submitted as outlined in Section III of this SOW. The following section describes the required contents of each of these supporting plans.

A. Quality Assurance Project Plan

The Setting Defendants shall develop a site-specific Quality Assurance Project Plan (QAPP), covering sample analysis and data handling for samples collected in all phases of the required Work, based upon the Consent Decree and guidance provided by U.S. EPA. The QAPP shall be consistent with the requirements of the EPA Contract Lab Program (CLP) for laboratories proposed outside the CLP. The QAPP shall at a minimum include:

Project Description

- Site History
- Past Data Collection Activity
- Project Scope
- Sample Network Design
- Parameters to be Tested and Frequency
- Project Schedule

Project Organization and Responsibility

Quality Assurance Objective for Measurement Data

- Level of Quality Control Effort
- Accuracy, Precision and Sensitivity of Analysis
- Completeness, Representativeness and Comparability

Sampling Procedures

Sample Custody

- Field Specific Custody Procedures
- Laboratory Chain of Custody Procedures

Calibration Procedures and Frequency

- Field Instruments/Equipment
- Laboratory Instruments

Analytical Procedures

- Non-Contract Laboratory Program Analytical Methods
- Field Screening and Analytical Protocol
- Laboratory Procedures

Internal Quality Control Checks

- Field Measurements
- Laboratory Analysis

Data Reduction, Validation, and Reporting

- Data Reduction
- Data Validation
- Data Reporting

Performance and System Audits

- Internal Audits of Field Activity
- Internal Laboratory Audit
- External Field Audit
- External Laboratory Audit

Preventive Maintenance

- Routine Preventative Maintenance Procedures and Schedules
- Field Instruments/Equipment
- Laboratory Instruments

Specific Routine Procedures to Assess Data Precision, Accuracy, and Completeness

- Field Measurement Data
- Laboratory Data

Corrective Action

- Sample Collection/Field Measurement
- Laboratory Analysis

Quality Assurance Reports to Management

The Settling Defendants shall submit the draft QAPP to U.S. EPA for review and approval. The QAPP shall be designed to address all phases of the project from pre-design to confirmatory sampling. If, because of the logistics of the project, the initial QAPP, developed as part of the RD Work Plan, does not lend itself to addressing all phases of the project, the QAPP shall be modified to incorporate any appropriate changes.

B. Health and Safety Plan

The Settling Defendants shall develop a Health and Safety Plan which is designed to protect onsite personnel and area residents from physical, chemical and all other hazards posed by this remedial action. The Plan shall develop the performance levels and criteria necessary to address the following areas.

- Description of Site
- Personnel
- Levels of protection
- Safe work practices and safe guards
- Medical surveillance
- Personal and environmental air monitoring
- Personal protective equipment
- Personal hygiene
- Decontamination - personal and equipment
- Site work zones
- Contaminant control
- Contingency and emergency planning
- Logs, reports and record keeping

The safety plan shall follow U.S. EPA guidance and all OSHA requirements as outlined in 29 CFR 1910 and 1926. As part of the Health and Safety Plan, the Settling Defendants shall include a Contingency Plan describing procedures to be used in the event of an accident or emergency at the site. The Contingency Plan shall include, at a minimum, the following:

1. Name of the person or entity responsible for responding in the event of an emergency incident;
2. Plan and date(s) for meeting(s) with the local community, including local, State and Federal agencies involved in the cleanup, as well as local emergency squads and hospitals;
3. First aid medical information;
4. Air Monitoring Plan (if applicable); and

5. Spill Prevention, Control, and Countermeasures (SPCC) Plan (if applicable), as specified in 40 CFR Part 109 describing measures to prevent and contingency plans for potential spills and discharges from materials handling and transportation.

C. Field Sampling Plan

The Settling Defendants shall develop a Field Sampling Plan (as described in "Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA," October 1988) The Field Sampling Plan should supplement the QAPP and address all sample collection activities.

D. Construction Quality Assurance Plan

The Settling Defendants shall submit a Construction Quality Assurance Plan (CQAP) which describes the Site specific components of the quality assurance program which shall ensure that the completed project meets or exceeds all design criteria, plans, and specifications. The draft CQAP shall be submitted with the preliminary design and the final CQAP shall be submitted with the final design. The CQAP shall contain, at a minimum, the following elements:

1. Responsibilities and authorities of all organizations and key personnel involved in the design and construction of the Remedial Action;
2. Qualifications of the Quality Assurance Official to demonstrate he possesses the training and experience necessary to fulfill his identified responsibilities;
3. Protocols for sampling and testing used to monitor construction; and
4. Identification of proposed quality assurance sampling activities including the sample size, locations, frequency of testing, acceptance and rejection data sheets, problem identification and corrective measures reports, evaluation reports, acceptance reports, and final documentation. A description of the provisions for final storage of all records consistent with the requirements of the Consent Decree shall be included.

Reporting requirements for CQA activities shall be described in detail in the CQA plan. This shall include such items as daily summary reports, inspection data sheets, problem identification and corrective measures reports, design acceptance reports, and final documentation. Provisions for the final storage of all records shall be presented in the CQA plan.

E. Technical Assistance Plan and Community Involvement Support

U.S. EPA has the responsibility of developing and implementing community involvement activities for the Site. The critical community involvement planning steps performed by U.S. EPA and the Ohio EPA include conducting community interviews and developing a Community Involvement Plan. This was completed during the RI/FS phase of the project by U.S. EPA. Although implementing the Community Involvement Plan is the responsibility of U.S. EPA, the Settling Defendants, if directed by U.S. EPA, shall assist by providing information regarding the

Site's history; participating in public meetings; assisting in preparing fact sheets for distribution to the general public; or conducting other activities approved by U.S. EPA. All PRP-conducted community involvement activities shall be planned and developed in coordination with U.S. EPA.

In addition to any assistance with community involvement activities, the Settling Defendants shall prepare a Technical Assistance Plan (TAP) that will provide and administer \$50,000 for a qualified community group to hire Technical Advisors, independent from the Settling defendants to help interpret and comment on Site-related documents developed under this SOW. Within 30 days after a request by U.S. EPA, the Settling Defendants shall submit to U.S. EPA its Technical Assistance Plan for Agency approval.

As part of the TAP, the Settling Defendants shall propose methods, including an application process, minimum eligibility requirements and selection criteria for awarding, and administering the funds above.

Any eligible group shall be:

- 1) A group of people who may be affected by a release or threatened release at the Site;
- 2) Incorporated as a nonprofit organization for the purposes of the Site or otherwise established as a charitable organization that operates within the geographical range of the Site and is already incorporated as a nonprofit organization; and
- 3) Able to demonstrate its capability to adequately and responsibly manage any funds awarded.

Any group is ineligible if it is:

- 1) A potentially responsible party (PRP) at the Site or represents such a PRP or is a group whose ability to represent the interests of the affected individuals might be limited as a result of receiving money or services from a PRP;
- 2) Affiliated with a national organization;
- 3) An academic institution;
- 4) A political subdivision; or
- 5) A group established or presently sustained by government entities, an RP, or any ineligible entity. Selection criteria should be consistent with 40 C.F.R. 35.4155. Funds may be awarded to only one qualified group at a time for purposes of this CD and SOW.

Also as part of the TAP, Settling Defendants shall include a proposed plan for documenting the eligibility of the selected community group, and informing the group and U.S. EPA if it believes

any individual member is ineligible (consistent with 40 C.F.R. 35.4030) to participate in the group. Settling Defendants shall also include a plan for informing the selected group of the activities that can and cannot be undertaken with Settling Defendants' funds. The lists of eligible and ineligible activities should be consistent with 40 C.F.R. 35.4070 and 35.4075, respectively. The TAP shall also include a proposal for offering and, if accepted, transferring up to \$5,000 to the selected group to cover its estimated need for funds for an initial start-up period. Also as part of the TAP, Settling Defendants shall include a plan for providing assistance to the selected community group in the solicitation for an independent Technical Advisor. As long as the group documents its selection and the advisor selected by the group satisfies the requirements specified in 40 C.F.R. 35.4190 and 35.4195, Settling Defendants shall accept the group's choice. Finally, Settling Defendants shall include a proposed plan for negotiating a contract with the selected community organization and the independent Technical Advisor. The contract shall specify the duties of the Settling Defendants, community group, and Technical Advisor, respectively, and establish a dispute resolution process. Settling Defendants shall notify U.S. EPA of any differences between the final contract and the attached draft contract.

The Settling Defendants may hire a third party to coordinate and administer the TAP (hereinafter referred to as the TAP Coordinator). However, any such TAP Coordinator shall be approved by U.S. EPA. It is the Settling Defendant's burden to demonstrate that the TAP Coordinator is qualified to perform this task. If the Settling Defendants opt to hire a TAP Coordinator, then it shall submit in writing that person's name, title, and qualifications to U.S. EPA within 15 days of the effective date of this Consent Decree. Additionally, the Settling Defendants shall designate within 15 days of the effective date of this Consent Decree an outreach coordinator who will be responsive to the public's inquiries and questions about the Site, including information about the application process and administration of the TAP. Settling Defendants shall also propose a plan for arranging for and hosting meetings between its Outreach Coordinator, the community group, the Technical Advisor, and other interested individuals.

The Settling Defendants shall provide U.S. EPA quarterly progress reports regarding the implementation of the TAP. To the extent practicable, the Settling Defendants shall:

- 1) Select the TAP recipient;
- 2) Release an initial \$5,000 in start-up expenses;
- 3) Confirm the Technical Advisor selection; and
- 4) Finalize the contract with the community group and its advisor, at least by the date on which the Draft RDRA Work Plan is due to U.S. EPA.

If the Community Group demonstrates, consistent with the criteria specified in 40 C.F.R. 35.4065, that it needs additional funds for TAP activity, the Community Group will submit a request to U.S. EPA. If the request meets the criteria specified in 40 C.F. R. §35.4065, additional monies may be awarded. Any unobligated funds shall revert to the Settling Defendants at the end of the project.

Within 30 calendar days of U.S. EPA's approval of the TAP, the Settling Defendants shall select the TAP recipient; release \$5,000 in start-up funds; confirm the selection of the Technical Advisor, and finalize an appropriate contract with the selected community representative and the Technical Advisor. In addition, the Settling Defendants shall provide U.S. EPA and Ohio EPA with quarterly progress reports concerning the implementation of the TAP.

V. SUMMARY OF MAJOR DELIVERABLES/SCHEDULE

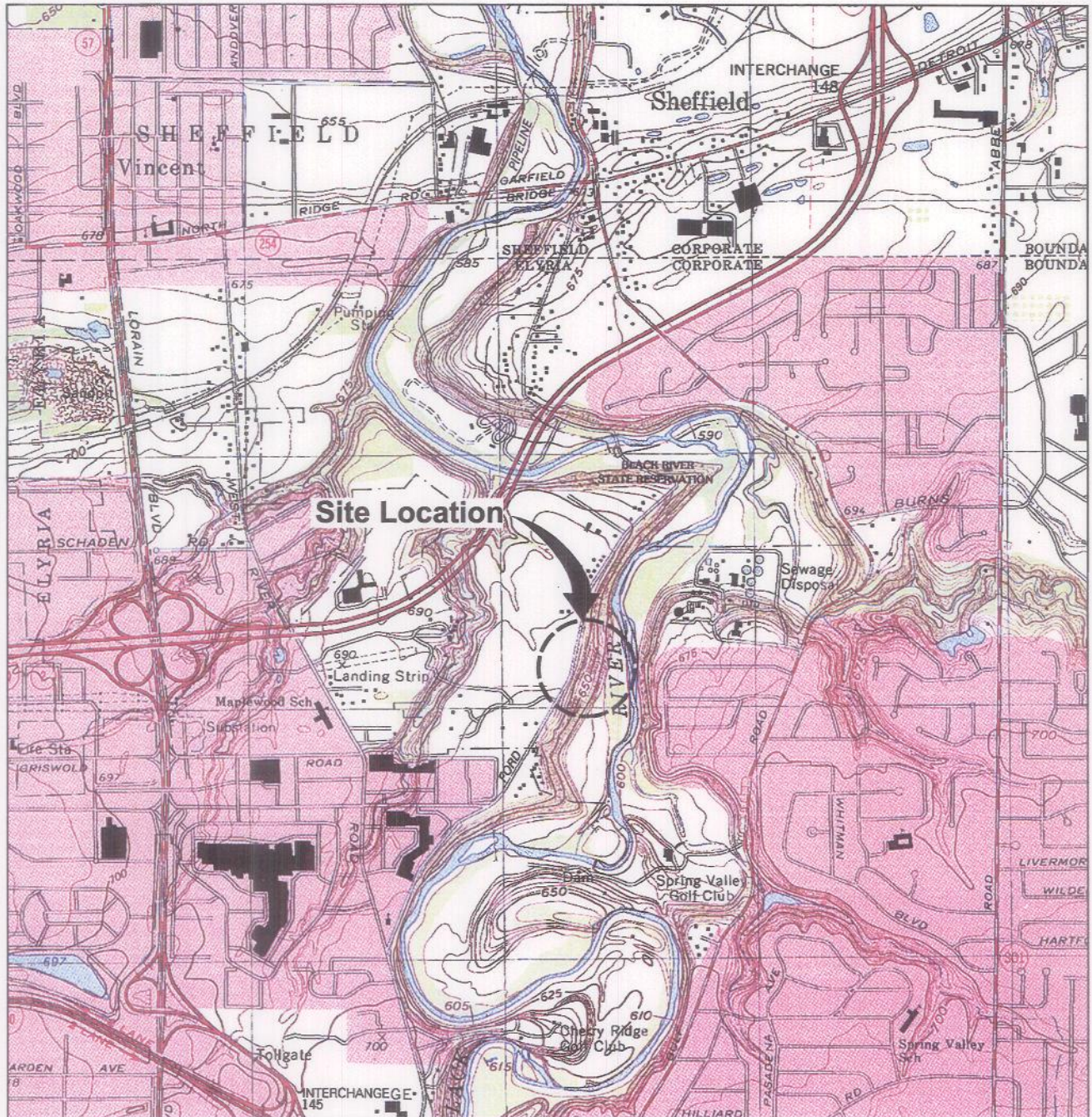
A summary of the project schedule and reporting requirements contained in this SOW is presented below:

<u>Deliverable / Milestone</u>	<u>Due Date (calendar days)</u>
RD Work Plan	One hundred twenty (120) days after Notice of Authorization to proceed with RD
Progress Reports	As described in the CD
Preliminary Design (50%)	Ninety (90) days after the Settling Defendant's receipt of all validated pre-design sample results, or a longer period of time as may be specified by U.S. EPA
Intermediate Design (75%)	If required, ninety (90) days after receipt of U.S. EPA's comments on (if required or submitted) the Preliminary Design, or a longer period of time as may be specified by U.S. EPA
Prefinal Design (95%)	<p>If an Intermediate Design is required, or submitted, ninety (90) days after receipt of U.S. EPA comments on the Intermediate Design, or a longer period of time as may be specified by U.S. EPA</p> <p>If an Intermediate Design is not required or submitted one hundred eighty (180) days after receipt of U.S. EPA comments on the Preliminary Design, or a longer period of time as may be specified by U.S. EPA</p>
Final Design (100%)	Thirty (30) days after receipt of U.S. EPA comments on the Prefinal Design, or a longer period of time as may be specified by U.S. EPA

RA Work Plan	Thirty (30) days after U.S. EPA approval of Final Design
Award RA Contract(s)	As defined in the approved RA Work Plan
Pre-Construction Inspection	As defined in the approved final RA Work Plan
Initiate Construction of RA	Fifteen (15) days after Pre-Construction Inspection and meeting
Completion of Construction	As approved by U.S. EPA in RA construction schedule included in RA Work Plan
Final Construction Completion	As approved by U.S. EPA in RA construction schedule
Submittal of Certification of Completion of Construction Report	As approved by U.S. EPA in RA construction schedule
U.S. EPA issuance of Certification of Completion of Construction	As approved by U.S. EPA in RA construction schedule included in RA Work Plan
Pre-certification inspection of Site RA	Pursuant to Paragraph 53 of the Consent Decree
Certification of Completion of the RA Report	Pursuant to Paragraph 53 of the Consent Decree
Final O&M Plan	As defined in the RA Work Plan
Pre-certification inspection of Site Work	Pursuant to Paragraph 54 of the Consent Decree
Certification of Completion of Work Report	Pursuant to Paragraph 54 of the Consent Site Decree

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APPENDIX C



REFERENCE: Base Map USGS 7.5 Min. Quad., Avon, Ohio, 1994.

2000' 0 2000'

Approximate Scale: 1" = 2000'



Area Location

FORD ROAD LANDFILL
ELYRIA, OHIO
RI/FS REPORT

SITE LOCATION MAP

BBL
BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

FIGURE
1

APPENDIX D

Lorain County Metropolitan Park District

Browning-Ferris Industries of Ohio, Inc.

Goodrich Corporation

Ford Motor Company

General Motors Corporation

Chevron Environmental Management Company, for itself and on behalf of KEWANEE Industries, Inc.